

Air Conditioning & Refrigeration News

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IN THIS ISSUE

Attention Manufacturers!

If you want to know the buying headquarters of the various departments of Uncle Sam's armed forces, see page 15. It tells who buys what, and where.

'If I Were a Salesman—'

Dallas housewives who have listened to a lot of sales talk give their slant on what methods they might use if they were salesmen. It's pretty revealing. This and other selling slants on page 5.

How To Size a Locker Plant

That's the "Question of the Week" which is answered on page 10.

Doing Low-Cost Air Cooling

Where price is an absolute factor in selling an air conditioning job, it's helpful to know where to cut the corners. Some suggestions for corner cutting as used in an actual installation are related on page 12.

'Salesmen Cut Costs—or Else'

A Harrisburg, Pa. commercial refrigeration dealer offers some unusual but fertile ideas about getting business. If the proof of the pudding is in the eating, all we can do is point out that this concern does \$150,000 of business a year. Page 6.

Selling Service Work To Stores

How one refrigeration service firm built up a neat business in blanket service contracts by proving to stores that high-grade service work builds repeat business is told, with details of how the company operates, on page 11.

Paid for a Hobby

When the sales manager for a Dallas room cooler dealer found amateur photographers among his sales force, he put a bounty on good pictures of installations, and found it a good sales promotion item. Page 3.

Locker Plants In National Defense

This week's editorial delves into the possibilities of the part that may be played by refrigerated locker plants in times of national emergency. Page 8.

Other Departments

Other locker plant news, particularly about insuring such plants, page 9. Distributor-dealer news, page 4. Air conditioning news, page 7. "What's New" in new products, page 13.

Buffalo Council Offers Promotion Booklet To Air Cooling Dealers

BUFFALO—First of a series of syndicated booklets designed to aid the dealer to explain the many advantages of air conditioning has been made available by the Air Conditioning Council of Western New York. The booklet, which may be used for direct mail, or as a "hand-out" piece, is being sold to dealers, distributors, utilities, and others interested in the progress of air conditioning.

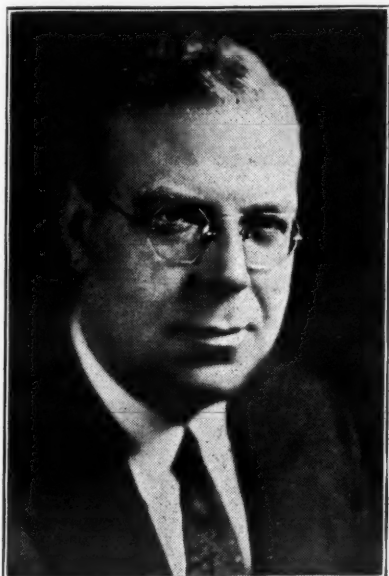
Walter P. Davis, secretary of the Buffalo council, reports that the promotion piece is being offered at \$50 per thousand copies, subject to prior sale. Each copy of the booklet carries a return card, which may be imprinted with the dealer's name and address.

Designed to interest the prospective owner of commercial air conditioning equipment, the 16-page booklet is based on the theme, "You can see air conditioning in the summer sales results."

Illustrations on each page show typical interiors of an air conditioned

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To Crosley



R. I. PETRIE

All-Porcelain Sales Up 83% In May

CHICAGO—In the largest month's business ever recorded by the household electric refrigerator industry, shipments of porcelain enameled refrigerators increased 83.9% in May over those of the preceding month, according to an analysis made by the Porcelain Enamel Institute of the reports of 14 refrigerator manufacturers to the National Electrical Manufacturers Association.

Porcelain enameled models far outstripped in percentage gain the increase in total refrigerator shipments, which amounted to 14.1% in May over April. Total shipments of

(Concluded on Page 15, Column 3)

Bank Nite Next?

OKLAHOMA CITY, Okla.—The "free chinaware" offer, long a feature of movie-house promotions, has finally penetrated the electric refrigerator sales field.

As part of a special "Record Days" store-wide sale conducted here recently, Sears-Roebuck offered an 119-piece "complete dinner service for eight persons" in combination with a 6-foot Coldspot refrigerator at a price of \$111.

N. Y. Edison Laundry Drive Has No Product Special

NEW YORK CITY—A two months' cooperative promotion built around the idea of the modern home laundry as a pleasant "work center" will be inaugurated about Sept. 1 by Consolidated Edison Co. and affiliated companies, E. F. Jeffe, Consolidated Edison vice president, announced last week at a meeting of 50 representatives of manufacturers and distributors who have been invited to participate in the drive.

According to present plans, the September-October activity would include not only home laundry equipment

Crosley's 'Swinging Door' Baffles N. Y. Fair Visitor

NEW YORK CITY—A refrigerator rigged with a motor which causes the door to open and shut continuously is a feature of the Crosley New York World's Fair exhibit.

A woman visitor stood watching the swinging door for several minutes, on her face a bewildered expression that eventually hardened into scorn.

"Who wants a refrigerator with a door that keeps opening and shutting like that?" she sniffed, and went on her way.

Petrie To Head Crosley Sales as A Vice President

CINCINNATI—Appointment of Robert I. Petrie as vice president and general sales manager of Crosley Corp. has been announced by Raymond C. Cosgrove, vice president and general manager of the manufacturing division of the corporation.

Mr. Petrie is well known throughout the household appliance industry. For 15 years he was with Nash-Kelvinator Corp., starting as a district manager. In 1934 he was promoted from sales manager of the Leonard division to sales manager for Kelvinator.

When Kelvinator organized its own finance company for the handling of distributors' and dealers' installment paper, in 1927, Mr. Petrie was chosen from the Kelvinator sales division as sales manager of that activity.

Prior to his connection with Kelvinator, Mr. Petrie was in charge of adding machine, bookkeeping machine, and cash register sales in the Detroit area for one of the leading manufacturers of this equipment.

Since 1938, Mr. Petrie was president and general manager of Barlow & Seelig Mfg. Co., Ripon, Wis., and director of that company's subsidiary, American Ironing Machine Co., Algonquin, Ill.

Field Force Shifted By Brunner Mfg. Co.

UTICA, N. Y.—Reassignment of several territorial representatives of Brunner Mfg. Co. has been announced by B. J. Scholl, sales manager of the company.

George W. Mathews, who formerly covered the Detroit area, will take over the Chicago territory, replacing R. E. Mercer, who has resigned. Mr. Mathews will now cover the upper part of Illinois and the southern part of Wisconsin. He will headquarter in Chicago.

Mr. Mathews has been active in commercial refrigeration for more than 20 years. Before joining Brunner, he was associated with Baker Ice Machine Co., Omaha, Neb., Lincoln Refrigerating Corp., Atlanta, and with the Lester U. Larkin Co., Baltimore. He has also had considerable experience in the automotive field previous to his connection with Brunner two years ago.

H. S. Dekker will succeed Mr. Mathews in the Detroit territory,

(Concluded on Page 16, Column 2)

Engineers Advised To Change Comfort Standards If Women Are To Remain Scantly Clad

WASHINGTON, D. C.—A "double standard of comfort" for men and women was described by Prof. C. P. Yaglou of the Harvard School of Public Health before the annual meeting of the American Industrial Hygiene Association last month in New York City. His studies revealed that women almost invariably prefer higher temperatures for comfort in both summer and winter.

Prof. Yaglou attributed his discovery to clothing habits, although differences in the constitution of men and women appeared to be partially responsible. To achieve agreement in matters of comfort, he advises heavier clothing for the fair sex, or lighter clothing for the strong sex.

"Under ordinary conditions at rest, in a room of 71.5° F., with 30% relative humidity and 20 f.p.m. air movement, the mean skin temperature of women was found to be about 2° F. lower than that of men, while the mean clothing temperature was 2° F. higher," he stated.

The studies also threw some inter-

esting light on that familiar complaint about cold hands and feet among women—a complaint which has started many a family argument over adjustment of the heating plant. The facts can be used by husbands for a stinging retort, and by the wives, in turn, for a shattering counterthrust.

"On an average, the feet and hands of women were 5° cooler than men's; the arms 4° cooler; the legs and head 3° cooler; and the trunk only 0.5° cooler than men's. Most of the men were comfortable, but the women generally were cold. To make most of the women comfortable, the room temperature had to be raised to about 76°, but then the men began to howl.

"When men and women were dressed alike, they were comfortable at about the same temperature, despite the great difference in their metabolic rates. With a minimum of clothing, a temperature of about 84° was good enough for both sexes.

(Concluded on Page 7, Column 1)

To Kelvinator



C. J. COWARD

C. J. Coward To Head Advertising For Kelvinator

DETROIT—Charles J. Coward has been appointed director of advertising and sales promotion of the Kelvinator division of Nash-Kelvinator Corp., to fill the vacancy left by J. Nelson Stuart, who recently resigned to return to sales management work.

Mr. Coward, who leaves his post as account executive for the Ralph H. Jones Co., Cincinnati, to assume his new duties at Kelvinator, has had 10 years of diversified experience in advertising and sales promotion work. Since 1936 he has been with the Jones agency, where as account executive he has directed all phases of appliance advertising and sales promotion for National Electrical Manufacturers Association, including Modern Kitchen Bureau activities.

Boulware Is Celotex General Manager

CHICAGO—Election of L. R. Boulware as vice president and general manager of the Celotex Co. was announced last week by Bro. Dahlberg, president of the company. Mr. Boulware also becomes a member of the board of directors and the executive committee. He assumes his new duties immediately.

Mr. Boulware was formerly vice president and general manager of the Carrier Corp. Previous to that he was general sales manager of the

(Concluded on Page 16, Column 4)

Bill In Congress Likely To Affect Instalment Sales

Measure Introduced For District of Columbia May Be a 'Model'

WASHINGTON, D. C.—Electrical appliance retailers are giving close attention to a bill (H.R. 9860) which would seriously affect present practices in instalment financing of electrical appliances in the District of Columbia, and which is being widely circulated throughout the country as a model bill for the consideration of state legislatures.

It was introduced in the House by Rep. Jennings Randolph of West Virginia, chairman of the Committee on the District of Columbia. It is now with that committee. It is believed that it will not get far this session, but that it is to be seriously considered in the next Congress in January. It was drafted by the Retailers National Council, and is expected to appear before coming legislatures in many states.

One of the main provisions of the bill would require that no repossession be made prior to 15 days from the date on which written notice of default is given. The provision is considered objectionable because it would give dishonest customers an opportunity to injure or hide merchandise.

Another section provides that re-

(Concluded on Page 16, Column 3)

G-E's Porcelain '6' Offered At \$161.75

BRIDGEPORT, Conn.—General Electric's new 6-cu. ft. low-price all-porcelain refrigerator, heretofore available in limited areas only, will now be supplied generally to all distributors, the company's appliance and merchandising department has announced.

The new unit, model PLB6-40, is identical with the G-E model LB-6-40, except for the outer porcelain finish. It will carry a recommended list price, in zone 1, of \$161.75, without the warranty. With quick trays, vegetable pan, water bottle, leftover dishes, and other accessories, the new refrigerator is said to be the least expensive all-porcelain model ever marketed by G-E.

Model PLB6-40 is powered by the vacuum-sealed CF-2 condensing unit. Power is introduced into the mechanism through patented metal glass leads, and all joints are silver-soldered.

\$146 Average Price Of Knoxville Sales

KNOXVILLE, Tenn.—Total of 568 refrigerators with an average sales price of \$146, were sold by dealers here during June, according to reports to Knoxville Electric Power & Water Board. Range sales for the month amounted to 227, with an average sales price of \$150.

Appliance sales totals for June were:

	Unit Sales	Average Price
Refrigerators	568	\$146
Ranges	227	150
Water Heaters	99	75
Washers	217	75
Ironers	12	67
Vacuum Cleaners	128	67
Radios	468	34
Cookers, Roasters	95	4
Attic Fans	9	78

Commercial sales for the month included 16 refrigerators, with an average sales price of \$481, and nine air conditioning units, with an average sales price of \$616.

Low Prices Help Belleville, Ill. Dealers In Town; Power Line Extensions Create Rural Prospects

By T. T. Quinn

BELLEVILLE, Ill.—More sales, more prospects, and fewer trade-ins pretty well sums up what the 1940 electric refrigerator prices have meant to appliance dealers here.

Rural line-building by Illinois-Iowa Power Co. has greatly increased the sales potential in the rural areas around Belleville, but dealers for the most part report that the bulk of their business has come from city residents, attracted by the low prices of this year's refrigerator models.

By and large, it appears, Belleville residents are on the conservative side, and the 1940 "specials" and prices have appealed to enough of them who had not previously owned an electric refrigerator to keep dealers busy inside the city limits. Besides, as some dealers reported, rural selling takes a good deal more time, farmers being slower buyers and distances between calls being greater than in town—and the power company, which merchandises appliances, has an "inside track" to this business that puts other retailers at a disadvantage that's pretty hard to overcome.

Business in general is on the up-grade here—the stove foundries are going good, and the brewery industry, which employs quite a number hereabouts, continues to do well.

Biggest recent source of optimism for business is the U. S. Army's decision to centralize its Air Corps activities at Scott Field, just outside the city. The Army is putting something like \$7,500,000 into buildings and equipment for the post, and while appliance dealers do not figure to cut in on any of this "gravy," the added Army personnel the change will bring into the community will put considerable extra money into circulation, which can't be tabbed as a cause for pessimism.

The electric range business in Belleville has been almost as bad as the refrigeration business has been good. Under present circumstances, dealers can't see much of a future for it. Reason for this, they explain, is that the local foundries turn out a good many coal stoves, which employees will naturally use to help keep the industry going. Also, coal is an abundant and low-cost fuel in the community, so that operating cost of these ranges is so low that electric range dealers can't even start to use that sales argument.

So much for the general outlook. Here are some reports of interviews with individual dealers:

'Specials' To Show, But Not To Sell

More refrigerator sales during the first four months of this year than in all of 1939, and not a "special" among them—that's the record of Roy L. Eidman, Kelvinator dealer.

Mr. Eidman has one of the \$114 models on his sales floor—the same one he started the season with. But it's never been anywhere, because Mr. Eidman and his four salesmen (two full-time, two part-time) have worked the "step-up" plan with considerable pleasure—and profit.

Most of the company's 1940 sales have been in the \$140 range, but a substantial number have been made above that class, Mr. Eidman said. He himself is sold right down the line on the Kelvinator merchandising set-up this year, and credits a good share of his success to the fact that he's had a "short line" to sell, and convenient price gradations from "special" to deluxe models.

Prospects can readily see the extra

dollars' worth in the more expensive models, he finds, and so the process of working them up from the leader models hasn't been at all tough. In general, his sales method is to show the prospect the model he comes in and asks about—and start the selling-up tactics from that point.

Mr. Eidman works on a strict "no canvassing" policy. Canvassing used to be a "must," but now it's a time-waster, he believes. Floor and user-leads keep all the salesmen busy, he finds, and a lead obtained in this way isn't so apt to prove a "dud," where the salesman ends up by giving his vocal chords a workout, and getting nowhere.

With business as good and competition as keen as it is this year, salesmen can't afford to have much lost time—their competitors will be taking sales from right under their noses.

Trade-ins have been easy to make, and easier to sell, Mr. Eidman reports. The company's policy is to give a 90-day warranty on all trade-in models, with full credit on a new model if the buyer decides to change over to one within the warranty period.

There have been more prospects for trade-in sales than there have been models to sell—Mr. Eidman's only regret is that he can't get more of such a stock on hand.

Happy To Be on The 'Standard' Side

Hiken Furniture Co. has joined the ranks of the dealers who have become convinced, through experience, that handling a "standard" nationally advertised refrigerator, at a nationally advertised price, means more money in the bank at the end of the season than a private-brand line, even when you can set your mark-up and selling prices to suit yourself.

The company switched over from private brand merchandise this year, and now handles Hotpoint, Leonard, and Copeland units, and business has been so much better than it ever was before that Mr. Hiken is convinced it can't be lower prices alone. He could make his own prices with the private brand line, but the store never could hit any volume business.

Best feature of standard-make equipment, as far as Mr. Hiken is concerned, is that the servicing is always available, and you can talk that up to prospects. So far, he's not had to worry about any servicing problems at all—but it's a comfort to know that there are distributors near-by in case he ever does get in a jam.

Not a "big" dealer, as Belleville appliance operators go, the company nevertheless this year has already sold more than 55 units, far more than ever before, Mr. Hiken reports. One of the things he's proudest of is the fact that 75% of the sales have been in the \$140-and-up price class.

'Specials' Don't Draw This Dealer's Praise

Manufacturers may be hearing songs of praise in many quarters for dropping refrigerator prices this year, but one dealership they'll never hear from in this vein is General Radio & Electric, Westinghouse retailer, if Clifford Biggs, one of the two owners of the place, has any

say-so about it.

As far as he's concerned, about all the "specials" have accomplished is to make higher-priced models harder to sell.

"They wouldn't have had to cut the prices this year to help my business," Mr. Biggs said. "If people want good refrigeration, they're willing to pay for it. We sold plenty of high-priced models when the mail-order houses were 'way under us, and I believe we could have kept right on doing it."

"We'll work almost as hard trying not to sell a 'special' as we do in trying to sell a deluxe model. There's no money in specials, so we've kept away from them. Right now one of our best models is the \$160 job."

The dealership has cut out its outside sales force, and all the work is now done by Mr. Biggs and his partner. What's the matter with a sales crew? Here are Mr. Biggs' objections:

1. Good salesmen are too hard to get, and even harder to train.
2. While the dealer is teaching salesmen how to qualify for a decent living, he's cutting down his own business volume. The time he spends as a teacher could be spent in getting sales that competitors are probably cashing in on.
3. Most salesmen weaken at the close, and the dealer has to step in and sew up the deal anyway. So he'd be money ahead if he handled the sale all the way.
4. Salesmen are anxious to meet all prices, and the "chiseling" prospect can start them running around in circles, creating just another problem for the dealer himself to straighten out, if he can.
5. To most salesmen, an order's an order, no matter who signs it. Too many of them are apt to be on the borderline as far as credit is concerned.

Another thing Mr. Biggs is giving up is the \$5 bonus to persons who turn in the names of prospects who later buy refrigerators or other appliances. "It almost developed into a racket," he explained. "We found out that some people were simply reporting every person they knew, whether or not they could qualify as prospects."

"When we made calls on some of these 'leads,' we discovered they hadn't the faintest idea of buying an appliance any time in the near future."

It began to look like some of our 'friends' were fixing to cash in, no matter who bought an appliance."

Much of the dealership's promotional activities in the newly electrified rural areas has been concentrated on milk coolers, "a good packaged item" in Mr. Biggs' opinion. He reported that he had recently made five milk cooler sales as the result of a single lead, with individual sales ranging between \$300 and \$400, and competition much lighter than in the household field.

Woman Manager Helps Closing 'Tough' Prospects

Operating on the theory that it takes a woman to sell to women, Belleville Electric Co., General Electric dealership, expects to get its share of 1940 refrigeration and appliance business—and to make a good profit doing it.

Manager of the dealership is a woman—and all the salesmen take orders from her. As a result, the Woman's Angle figures prominently in the company's way of doing business.

One of the company's principal convictions is that the housewife buys an electric refrigerator, or any other appliance, for that matter, for the extra convenience and comfort it brings into her life. She doesn't buy refrigeration—she buys the advantages refrigeration affords: frozen desserts, crispier salads, a more attractive kitchen.

So, the dealership reasons, if that's what she wants, that's what to sell her. Forget about mechanical perfection (unless her husband is along, and wants to know) and sell her the use features of the refrigerator. That's the surest way to sales.

Another thing the company has found is that women tend to believe what another woman tells them about a refrigerator or range. When one woman tells another about the frozen desserts or salads she can have with a new refrigerator, it's usually believed. The same information, from a man, would be just part of a "sales talk" to the average housewife.

So, when they run into a tough customer, the men on Belleville Electric's sales staff bring the prospect into the showroom, and let the woman sales manager talk to her.

35 ASSORTED GILMER V-BELTS

All fast-selling, easily identified belts for leading makes of refrigerators and other appliances.

1 GILMER HANDIMETER

A slick little gadget that instantly measures any belt brought in, from 3/4" to 7 1/2" wide, up to 75" long. Saves time and misfits.

GILMER "EYE-FUL" TOWER

A 15" wide circular Silent Salesman display stand that holds up to 70 belts. With perpetual inventory form.

PLUS A copy of the new 1940 edition of "America's Belt Bible" listing belts for 6800 models, 153 makes of refrigerators; also oil burners, stokers and other appliances.

MEN. GRAB THIS BARGAIN!

Imagine something that you just place on your counter, needs no attention, does its own selling—costs you only \$20.96 and brings you back \$34.97! That's pretty sweet profit, isn't it? Get those easy profits for yourself!

ALL FOR YOU GET YOUR PROFIT \$14.01

\$20.96

\$34.97

L. H. GILMER COMPANY Tacony, Philadelphia, Pa.

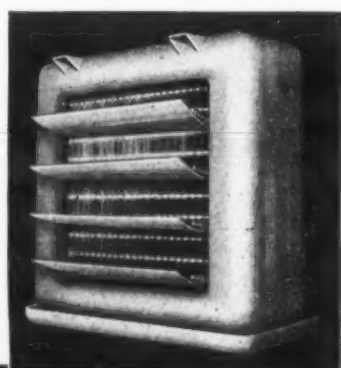
Gentlemen: I know a BARGAIN when I see one. Send me one of your complete Gilmer "Eye-ful" Tower Assortment and bill me (\$20.96) through your nearest jobber.

NAME _____

ADDRESS _____

This handy reference book will save you plenty of headaches

For Product Cooling .. MARLO UNIT COOLERS



Designed especially for Walkin Refrigerators, 34 degrees and over, these units can also be used for Air Conditioning.

The Coil Cores in Marlo Unit Coolers are Headered, and the Tubing proportioned in Circuits that eliminates any short circuiting of the Refrigerant and insures an even Coil temperature.

Housings are solidly constructed, being made

of aluminum two-piece Castings—insulated frame, no rattles, attractively painted, corrosion free. Fan Motor, Fan and Coil Cores are easily removed for inspection, if necessary.

All Marlo Unit Coolers are conservatively rated. Three-speed control permits flexibility and humidity regulation.

Send for Bulletin No. 392 containing complete details.

MARLO COIL CO., 6135 Manchester Ave., St. Louis, Mo.
Refrigeration Equipment Manufacturers

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UP TO TEN TONS OF SOLID BOOMING COLD FROM NEW CANNON COOLER

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When you buy Virginia, you're sure of fast, dependable service.

Why? One reason is Virginia's new roomful of clerical machinery—operated by a trained, competent staff who know that time means money—where our customers' orders are concerned.



A POPULAR LINE OF LOW-PRESSURE REFRIGERANTS

EXTRA DRY ESOTOO • V-METH-L • METHYLENE CHLORIDE

VIRGINIA SMELTING COMPANY

At tidewater, WEST NORFOLK, VIRGINIA



Picture-Taking Aids Sales Efforts on Room Coolers

DALLAS, Tex.—Members of the sales staff of the major appliance department of W. A. Green Co., headed by Frank B. LaPrelle, are turning their talents as amateur photographers to their aid in sale of portable cooler units for residential use in Dallas.

The idea was hit upon when George M. Hunter, one of the staff, and an amateur camera enthusiast, arrived one day with a number of pictures he had made of an installation in a Dallas home. Mr. LaPrelle arranged with him to print a sufficient number of copies to provide each of the staff with one to be used as an illustration when discussing unit coolers with prospects. The prints were paid for by Mr. LaPrelle at the rate of 25 cents each.

Other members of the staff who are camera fans have taken up the plan, getting pictures of the installations of which they are particularly proud; and little by little the staff is building a folio of photographs of representative jobs throughout the city.

Creditors Ask Bankruptcy Action, Claiming Dealer Transferred Property

DETROIT — Involuntary bankruptcy proceedings have been filed in U. S. district court here against Michigan Refrigeration & Equipment Co., 4433 Cass Ave., Detroit, by Ansul Chemical Co., Marinette, Wis., and J. M. Oberc, Inc. and James E. Perry of Detroit.

Claiming that the debtor firm is insolvent, the petitioners aver that Michigan Refrigeration & Equipment Co. committed an act of bankruptcy on or about June 12, by transferring property valued at \$2,000 to Westinghouse, thereby showing preference to one creditor and hindering other creditors from collecting the monies due them.

The petitioners also assert that the debtor firm committed other acts of bankruptcy in transferring valuable assets to unknown persons. They ask for the appointment of a receiver in order to preserve the assets for the creditors, alleging that liabilities amount to more than \$15,000, assets to more than \$1,000.

Study To Record Costs of Cooling Various Foods

ST. LOUIS—Daily cost sheets covering the operation of individual commercial refrigeration units are being kept in the Remley Arcade super-market here, operated by the Atlantic & Pacific Tea Co. The installation was recently made by Frigidaire at a cost of \$7,500.

According to J. S. Tenge, the use of individual compressors on each commercial unit enables the store's management to determine refrigeration costs for each type of food handled.

Information obtained here will be used as the basis for planning more efficient refrigeration systems for other stores in the super-market chain.

New Distributors Named For 'Wizaire' Line

TOLEDO — Distributors recently appointed to handle the Wizardaire hermetically sealed window conditioning units include Hi-Speed Tire & Accessory Co., for Toledo; the Sill Engineering & Construction Co. for the Cleveland area; and the Cooling & Heating Supply Co., for Columbus. The Wizardaire unit is manufactured by Certified Products Co. here.

Milwaukee Dealer Changes

MILWAUKEE—Better Home Appliance Co., Norge dealer, has opened for business at 1648 N. 12th St. Pepper Appliance Co., G-E dealer, is now located in new quarters at Teutonia and North Aves.

Lee Cox Puts Earl Bridge 'On the Record' To Get Over a New Product Story

SALT LAKE CITY—Lee Cox, western sales manager for Norge, recently placed a modern slant on the old adage that "an institution is but the lengthened shadow of a man."

Due to time limitations, Earl Bridge, manager of Fastemp home heater and electric washer sales for Norge, was unable to travel farther west than Salt Lake City during a recent swing of the country in contacting distributors on behalf of the new Norge five-unit Fastemp heater line.

Learning that Mr. Bridge would be unable to continue on from Salt Lake City for personal appearances, Mr. Cox "lengthened" the sales manager's shadow by taking Mr. Bridge to a phonograph establishment in Salt Lake City and making a recording of his Fastemp heater discussion.

Auditors were requested to first set up a series of cut-out counter cards illustrating the three sizes of heater models, as well as a poster showing in phantom the interior features and mechanics of the new space heaters. Frequent reference was made in the phonographic discussion to various merchandising sales points illustrated by the cards. The discussion filled both sides of two 10-inch "platters."

Mr. Cox sent the two records, together with the display cut-outs, to his distributors in Spokane, Portland, Seattle, San Francisco, Los Angeles, Phoenix, and El Centro, Calif., with instructions to summon their key men to meetings to be held simultaneously in all seven cities. The unique idea, according to reports from distributors, registered strongly and the meetings proved highly successful.

He Literally 'Drops In' on His Customers



Lee Cox, western sales manager for Norge, who develops some unusual methods in his work (see story at left), pilots his own plane in covering his territory, having flown nearly 170,000 miles on business. He is shown here (holding map) ready to take off

from Detroit in his latest ship. With Mr. Cox are Howard E. Blood, president of Norge; Peter Sues, sales manager for the Leo J. Meyberg Co., Norge distributor in Los Angeles; and William Lancaster, Meyberg appliance sales manager.

EVERY PAR UNIT
Precision Built!

Translated into terms of operating economy and long life, Par precision methods mean just one thing . . . more value for your money. Built by men who have spent their working lives in the mechanical refrigeration industry, Par condensing equipment incorporates precise workmanship in every detail. Here are some of those details: close-grained seasoned iron

castings . . . ring-type pistons of nickel alloy . . . drop forged steel crank shafts hardened, ground and hand lapped . . . selective fitted Oilite crank shaft bearings . . . cylinders diamond bored and honed . . . statically balanced fly wheels. All of these are details that are highly important when you are to invest your money in refrigeration equipment.

★ ★ A PAR UNIT FOR EVERY JOB ★ ★ SEE YOUR JOBBER

ALABAMA
BIRMINGHAM—REFRIGERATION SUPPLIES DISTRIBUTOR
MONTGOMERY—TEAGUE HARDWARE CO.

ARIZONA
PHOENIX—J. CARL WHITE CO.

CALIFORNIA
FRESNO—ARBELL REFRIGERATION SUPPLIES
LONG BEACH—REFRIGERATION SUPPLIES DISTRIBUTORS
LOS ANGELES—FRANK GILLET COMPANY
LOS ANGELES—REFRIGERATION SUPPLIES DISTRIBUTORS
OAKLAND—CALIFORNIA REFRIGERATOR CO.
SAN FRANCISCO—CALIFORNIA REFRIGERATOR COMPANY

COLORADO
DENVER—MC COMBS REFRIGERATION SUPPLY CO.
DISTRICT OF COLUMBIA
WASHINGTON—MELCHIOR, ARMSTRONG, DESSAU COMPANY

FLORIDA
JACKSONVILLE—BOWEN REFRIGERATION SUPPLIES, INC.
TAMPA—BOWEN REFRIGERATION SUPPLIES, INC.
WEST PALM BEACH—MOTOR PARTS & EQUIPMENT COMPANY, INC.

GEORGIA
ATLANTA—BOWEN REFRIGERATION SUPPLIES, INC.
MACON—LOWE ELECTRIC CO.

ILLINOIS
CHICAGO—H. W. BLYTHE COMPANY
CHICAGO—AUTOMATIC HEATING & COOLING SUPPLY COMPANY

INDIANA
INDIANAPOLIS—F. H. LANGSENKAMP CO.
SOUTH BEND—F. H. LANGSENKAMP CO.

IOWA
CEDAR RAPIDS—DENNIS REFRIGERATION SUPPLY
DAVENPORT—REPUBLIC ELECTRIC COMPANY
DES MOINES—DENNIS REFRIGERATION SUPPLY
SIoux CITY—DENNIS REFRIGERATION SUPPLY
WATERLOO—WINTERBOTTOM SUPPLY CO.

KANSAS
WICHITA—HOWARD SUPPLY COMPANY

KENTUCKY
LEXINGTON—UNITED SERVICE CO., INC.
LOUISVILLE—S. W. H. SUPPLY CO., INC.

MARYLAND
BALTIMORE—MELCHIOR, ARMSTRONG, DESSAU COMPANY

MASSACHUSETTS
BOSTON—MELCHIOR, ARMSTRONG, DESSAU CO.
SPRINGFIELD—MELCHIOR, ARMSTRONG, DESSAU COMPANY

MICHIGAN
FLINT—LIFSEY DISTRIBUTING COMPANY
GRAND RAPIDS—S. F. HARRIS & SON

MINNESOTA
MINNEAPOLIS—REFRIGERATION & INDUSTRIAL SUPPLY CO., INC.

MISSOURI
KANSAS CITY—FORSLUND PUMP & MACHINERY COMPANY
ST. LOUIS—BRASS & COPPER SALES COMPANY

NEBRASKA
LINCOLN—WICKHAM SUPPLY COMPANY
OMAHA—INTERSTATE MACHINERY & SUPPLY CO.

NEW JERSEY
NEWARK—MELCHIOR, ARMSTRONG, DESSAU CO.
RIDGEFIELD—MELCHIOR, ARMSTRONG, DESSAU COMPANY

NEW YORK
ALBANY—MELCHIOR, ARMSTRONG, DESSAU COMPANY
BROOKLYN—MELCHIOR, ARMSTRONG, DESSAU COMPANY
BRONX—MELCHIOR, ARMSTRONG, DESSAU CO.
BUFFALO—MELCHIOR, ARMSTRONG, DESSAU CO.
ROCHESTER—MELCHIOR, ARMSTRONG, DESSAU COMPANY

NORTH CAROLINA
CHARLOTTE—HENRY V. DICK & COMPANY
GREENSBORO—HISCO, INC.
RALEIGH—HENRY V. DICK & CO.

OHIO
AKRON—HENRY G. HANSEN
CINCINNATI—THE MERKEL BROTHERS CO.
CLEVELAND—DEBES & COMPANY
COLUMBUS—REFRIGERATION ELECTRIC SUPPLY COMPANY

OKLAHOMA
DAYTON—THE W. H. KIEFABER COMPANY
HAMILTON—W. H. KIEFABER CO.
TOLEDO—HEAT & POWER ENGINEERING CO.

OREGON
PORTLAND—REFRIGERATION SUPPLY, INC.

PENNSYLVANIA
HARRISBURG—MELCHIOR, ARMSTRONG, DESSAU COMPANY
PHILADELPHIA—MELCHIOR, ARMSTRONG, DESSAU COMPANY
PITTSBURGH—MELCHIOR, ARMSTRONG, DESSAU COMPANY

TEXAS
CORPUS CHRISTI—HOLSWORTH EQUIPMENT CO.
DALLAS—THE ELECTROMOTIVE CORPORATION
FORT WORTH—MC KINLEY REFRIGERATION SUPPLY COMPANY, INC.
HOUSTON—D. C. LINGO COMPANY
LUBBOCK—R. R. PARTS AND SUPPLIES COMPANY
WICHITA FALLS—UNITED ELECTRIC SERVICE CO.

VIRGINIA
NORFOLK—NOLAN COMPANY, INC.
RICHMOND—A. R. TILLER, INC.

WASHINGTON
SEATTLE—REFRIGERATION SUPPLY, INC.
SPOKANE—REFRIGERATION PARTS SUPPLY CO.

WEST VIRGINIA
CHARLESTON—AIR CONDITIONING & REFRIGERATION SUPPLIES, INC.

WISCONSIN
APPLETON—REFRIGERATION SPECIALTY CO.
MILWAUKEE—REFRIGERATION SPECIALTY CO.

CANADA
MONTREAL, QUEBEC—RAILWAY & ENGINEERING SPECIALTIES, LTD.
TORONTO, ONTARIO—RAILWAY & ENGINEERING SPECIALTIES, LTD.
WINNIPEG, MANITOBA—RAILWAY & ENGINEERING SPECIALTIES, LTD.
VANCOUVER, BRITISH COLUMBIA—FLECK BROS., LTD.

SOUTH CAROLINA
COLUMBIA—HENRY V. DICK & CO.

TENNESSEE
CHATTANOOGA—PEGAR MACHINERY CO.
KNOXVILLE—HENRY V. DICK & CO.
MEMPHIS—UNITED REFRIGERATOR SUPPLY CO.
NASHVILLE—ELECTRA DISTRIBUTING COMPANY

TEXAS
CORPUS CHRISTI—HOLSWORTH EQUIPMENT CO.
DALLAS—THE ELECTROMOTIVE CORPORATION
FORT WORTH—MC KINLEY REFRIGERATION SUPPLY COMPANY, INC.
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WINNIPEG, MANITOBA—RAILWAY & ENGINEERING SPECIALTIES, LTD.
VANCOUVER, BRITISH COLUMBIA—FLECK BROS., LTD.

EXPORT DEPARTMENT
MELCHIOR, ARMSTRONG, DESSAU COMPANY, RIDGEFIELD, N. J.



Catalog of Complete Line Sent on Request

MODERN EQUIPMENT CORPORATION - DEFIANCE, OHIO

WHAT'S DOING WITH DEALERS

One Man Sells 51 Refrigerators In Month As Harrisburg Store Makes New Record

HARRISBURG, Pa.—Smashing all previous sales records, Hall's Electric Store, Frigidaire dealer here, hung up a mark of 207 refrigerators sold during May. It was the largest single month since the store was opened six years ago. In June a "jubilee of values" was launched at the store, and an initial order of four carloads of refrigerators was the first step in a drive to surpass the previous month's performance.

High salesman for the record May drive was Harry Eyer who sold 51 refrigerators. A bonus check for \$250 was awarded Mr. Eyer for his sizzling sales action.

Spearhead of the firm's sales plan is friendly contact with customers which has held through the 41-year history of the firm. Established in Carlisle, Pa. in 1899 by W. N. Hall, the firm now maintains stores in Carlisle and Harrisburg. The two outlets now have over 6,000 accounts, 4,500 in the Harrisburg store alone. More than 3,000 refrigerators have been sold by the company. From a \$500 a year business in 1899, the firm boosted the business over the \$250,000 mark in 1939. The firm makes a point of "personalized service" to every customer.

John Hall, manager of the Harrisburg store, points to two features in the sales plan. Every customer, he says, is given a payment plan suitable to income.

During the June "jubilee of values" this payment plan featured no money down, 15 cents a day, and a free home trial if desired. The other feature making for sales is the large stock of models maintained by the store which guarantees immediate delivery to every customer.

A large volume of newspaper advertising is carried in the local papers. A three-quarter page spread in the Harrisburg Telegraph told the complete story of the store's payment plan, the large number of models to choose from, and played up the 41-year record of the store in the appliance business.

American Engineering Co. Is In New Location In Baltimore

BALTIMORE—American Engineering & Appliance Co., dealer in refrigeration, oil burners, washing machines, has moved to new quarters at 815 E. Pratt St.

Large Display Space In \$9,000 Structure

CARLSBAD, N. M.—The fact that large appliance display rooms are the exception rather than the rule in this section of the country makes the size and modernity of the recently completed building erected by H. S. Durrance, Frigidaire dealer, unusually impressive.

Constructed of brick and tile, at a cost of \$9,000, the building is 50 feet wide and 100 feet deep. Floor space available for display purposes enables Mr. Durrance to show a wide selection of refrigerators and other appliances. Rear portion of the store is devoted to office space.

Mr. Durrance, who has been in the refrigeration industry for 17 years, started his career in the business in Houston, Tex., as a Frigidaire service man. He remained there from 1923 until 1927, when he moved to Carlsbad. The next year, in 1928, he became a Frigidaire dealer.

From his years as a service man and dealer, Mr. Durrance has established a policy of good service, an element he is convinced helps retain old customers and obtain new ones.

'Added Returns' Proved On Paper Sell Owners Of Apartment Houses

DALLAS, Tex.—Putting the "profit story" into apartment house refrigerator selling has paved the way for Emerson DeJarnett of the Dallas office of Kelvinator to corral orders for 75 units this year among operators of multiple dwellings in this territory.

Only recently, Mr. DeJarnett closed an order for 26 units for the Miller's Courts apartments, and earlier in the year landed another order for 24 units for another development. This latter operator already has begun negotiations for an additional 24 models.

Mr. DeJarnett's selling method is simple. He sells the added returns that an investment in modern refrigeration equipment makes possible.

Taking the current rental rate, he estimates what reasonable increase can be made after the equipment is installed. Then he spreads the cost of this modernization over the period of liquidation, to establish the monthly cost. A final comparison between the cost of refrigeration and the increased revenues it makes possible is the clinching argument.

"In the case of the Miller's Courts, for example," Mr. DeJarnett said, "I found that the total profit for the period would be about \$2,000."

"In this instance, I estimated the monthly rental increase at \$2.50, and the period of liquidation of investment cost at three years. Comparison of the totals showed that the owner would have earned, at the given rental increase, enough to not only pay the full cost of installation, but to earn an additional profit of \$2,000. In other words, I try to sell the apartment owner the conviction that he is actually buying increased earning power when he modernizes his refrigeration, and that he's not merely buying additional convenience for his tenants."

Minnesotan Opens Electric Shop

COKATO, Minn.—Arnold H. Johnson has opened an electric shop in the Harkman Tire building here.

Rempe UNIT COOLERS



CONSERVATIVE ratings; full area tubes and bends; scientifically determined fin spacings; naturally turbulent refrigerants and enclosed motor with overlapping blade type fan, guarantees economy of operation and dependable refrigeration to 11° F.

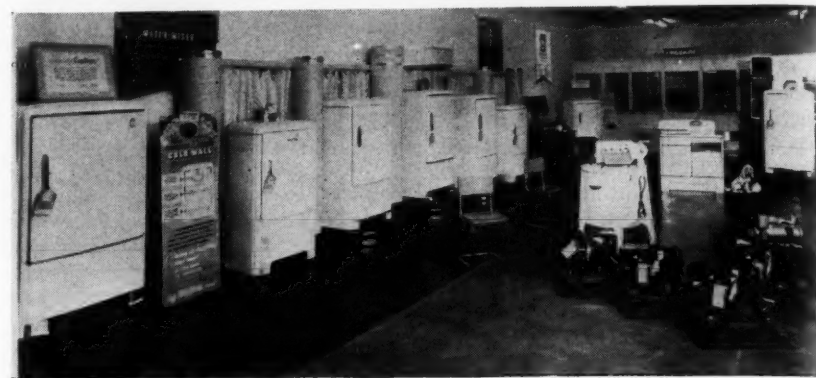
Handy reference Bulletin No. 105 on request.

Rempe Co.

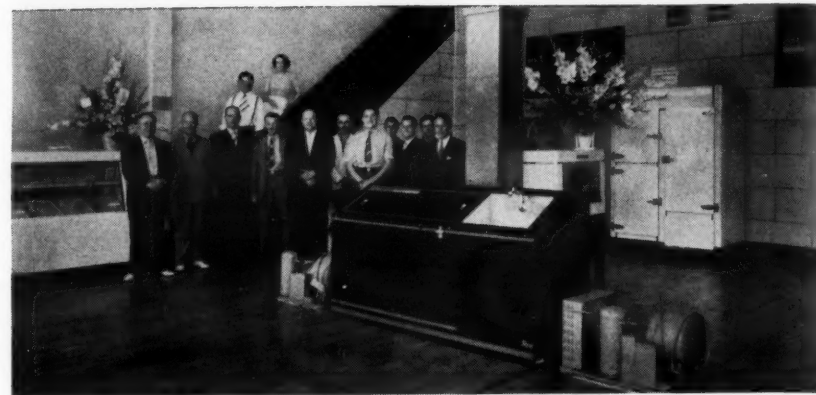
342 N. Sacramento Blvd., Chicago, Ill.

Panel Coolers • Fin Coils • Blower Units • Coil and Drain Baffles • Pipe Coils • Air Conditioning Coils • Autodraft Coils

Two Dealers Demonstrate Their Faith In Big Future For Refrigeration Merchandising



Down in the part of the country where large showrooms are somewhat of an exception, H. S. Durrance, Frigidaire dealer in Carlsbad, N. M., has recently completed the building of the showroom pictured above, which affords him the chance to display a wide variety of models in a roomy, comfortable atmosphere.



New Intermountain territory distributor for Westinghouse commercial refrigeration equipment is the Winters Mfg. & Distributing Co. of Salt Lake City. Pictured in the company's spacious showroom are Lew Brown, Westinghouse district manager; G. Gillespie, Westinghouse merchandising supervisor; V. Edwards, manager of the lamp department, Westinghouse Salt Lake City office; Carl Rippon (on

stairs), salesman for the Winters company; Theda Sorenson, secretary; Jess Crowe, engineer for the Winters company; Elwood G. Winters, head of the distributorship; Wayne Peterson, service man; Richard Carman, shop superintendent for the distributor; Frank Porter, service man; James F. Weaver, salesman; Floyd Atkins, service man; and Mr. Cleven.

12 Dealers Cooperate In Lancaster Advertisement

LANCASTER, Pa.—In a move to boost July sales, 12 Lancaster electric refrigerator dealers cooperated in a full page of advertising in the July 17 issue of the Lancaster Daily Intelligencer Journal.

Headlined "You're Paying For an Electric Refrigerator Whether You Own One or Not," the page's center section featured an exposition of the value of electric refrigeration for safe preservation of perishable foods, as well as its convenience in food preparation, its automatic operation, and its economy.

Individual dealer advertisements rimmed the center section, cooperating firms being Lancaster Modern Electric Co., Leonard; Morris Appliance Co., Stewart-Warner; Gas-Oil Products Co., Westinghouse; George Smithgall, General Electric; Westerberger, Maley & Miles, Leonard; Landis Electric Co., Kelvinator; Sears, Roebuck & Co., Coldspot; American Auto Store, Westinghouse; Montgomery-Ward; H. M. Vonder-smith, General Electric; J. H. Troup Music House, Kelvinator; and Darmstaetter's, Crosley.

Kenosha Store Opens New Appliance Section

KENOSHA, Wis.—Montgomery-Ward formally opened its remodeled and enlarged store here at 710-714 58th St. July 11. A 50% increase in sales space in the basement provides room for a new electrical appliance section. D. A. Satterthwaite is store manager.

Winters Distributor for Westinghouse Equipment In Mountain Territory

SALT LAKE CITY—Winters Mfg. & Distributing Co., with headquarters at 47 E. Fourth St., S., is operating as distributor for Westinghouse commercial refrigeration equipment in the Intermountain territory.

This territory includes Montana, Wyoming, Idaho, Utah, and eastern Nevada.

Owner and general manager of the Winters Mfg. & Distributing Co. is Elwood G. Winters. Carl Rippon and James F. Weaver are two of the firm's leading salesmen; Jess Crowe is engineer for the company; Richard Carman is shop superintendent; and Frank Porter, Floyd Atkins, and Wayne Peterson are service men.

The company is designing and manufacturing truck refrigeration units for some western shipping concerns, and is planning eventually to go into production on such units for sale to other dealers.

North Coast Electric Co. Has First 'All Lines' Show

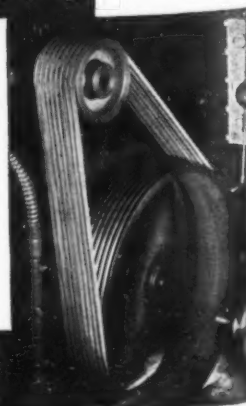
PORTLAND, Ore.—A three-day major appliance show was held recently at the Multnomah hotel by North Coast Electric Co., distributor in Oregon and Washington for Crosley refrigerators and radios.

According to F. N. Ashford, sales promotion manager, this was the first time that the company had attempted a joint display of all its lines.

MANHATTAN V-BELTS

Give Steady Service . . . for Fan, Compressor and Pump Drives

Steady, silent, smooth-running MANHATTAN V-Belts deliver lasting service because of their exclusive construction—endless whipcord strength member is in the neutral axis and completely floated in rubber. Resist side wear, stretch and destructive internal heat.



THE MANHATTAN RUBBER MFG. DIVISION
OF RAYBESTOS-MANHATTAN, INC.
45 Townsend Street Passaic, New Jersey

Tubing Problem?
Let Bundy Engineers Help You



Bundy's complete engineering and research facilities are at your disposal. There is no obligation.

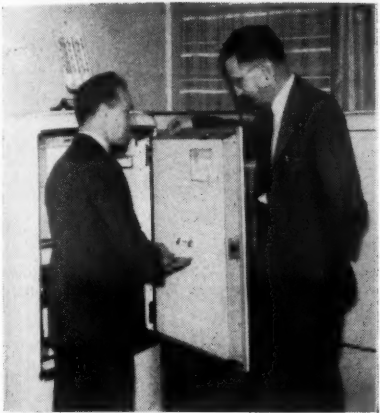
BUNDY
TUBING
DETROIT

Bait Your Sales Hook With Bargain Prices To Land the 'Big Fellows,' Dealer Advises

HARRISBURG, Pa.—When prospects are hunting for bargain prices and easy terms don't be bashful about advertising them, says G. P. Sheaffer, manager of C. M. Sigler, Inc., Frigidaire dealer here. He adds, however, that when you bait your sales hook with such attractive lures your salesmen must be instructed in clever angling so that the sales will be far out of the "small fry" class in price.

Mr. Sheaffer proved his point by comparing his methods with performance. In all radio and newspaper advertising and in window displays low prices and easy terms are played up, yet neither is used except as a springboard in selling the prospect up once they are contacted.

'Upper-Bracket' Selling



G. P. Sheaffer (left), manager of C. M. Sigler, Inc., Harrisburg, Pa., believes in stressing conveniences to sell higher-priced refrigerators.

Results? The store's business is up 90% over last year for the first six months and seven carloads of refrigerators have been sold. The average selling price is said to be averaging \$160.

Believing that the average housewife will pay for added conveniences in her refrigerator, a price-raising sales story stressing these conveni-

ences is delivered to all prospects, bargain hunters notwithstanding. When a prospect is adamant on price, the store has a stock of used refrigerators reconditioned for sale. In selling these units, the prospect is told just what can be expected in the way of performance.

The store's eight salesmen are all on commission, and as commission checks are proportionate to selling price, they are on their toes to sell up. These commission salesmen have been with the company for periods ranging from five to 18 years. The only salaried man is the sales manager who gets a percentage of sales made on the floor plus an override. This gives him an incentive to keep the selling price in the upper brackets.

Every prospect is double-checked on credit. Some 40% are turned down after checking. In outside selling this system saves the salesmen time and effort, Mr. Sheaffer says, because for every prospect they contact they can wheel all their sales guns into position without having their shots rendered blank by poor credit risks.

Extra added attraction for salesmen this June was a "fishing contest" offering salesmen a free fishing trip if quotas were reached at the end of the month. A map of sales progress posted on the wall of the sales meeting room featured a shapely bathing beauty "at the end of the trail." All salesmen, at last reports, were making rapid progress toward the end of the trail.

Also featured during this month was a novel window display that was a real traffic stopper. The display was an exact model of the old Harrisburg Lock Canal built by a relative of one of the salesmen. The display tied in with a newspaper story on the canal. On either side of this display was a bargain announcement, one featuring the "special" refrigerator, the other listing bargains in used appliances. These displays are used as stepping stones to higher-priced merchandise, emphasized Mr. Sheaffer.

Dallas Housewives Give Salesmen Tips On the 'Smart Way' To Sell Appliances

DALLAS, Tex.—What does the average housewife consider a smart selling approach for electrical appliances? To give appliance salesmen the opinions of prospects, Dallas housewives were quizzed on this subject and their opinions as keys to sales were published in a recent bulletin of the Dallas Power & Light Co.

One housewife, putting the emphasis on knowledge of product, answered:

KNOW YOUR PRODUCTS

"If I were selling electrical goods, I would be an expert in my line. I would know more technical points about my appliances than most of the salespeople who call on me. I would know how they are built and why they are built. I would explain these technical points in understandable terms—terms easily understood by housewives who, like myself, are often confused by the small number of salespeople who really know what they are selling.

"Above all, I would be practical in my talks with customers. I would tell them how my electrical appliances bring new pleasure to house-keeping. I believe most women buy electrical appliances only because they know their housekeeping tasks will be made less burdensome.

"Of course there are other reasons for buying, but they also concern the well-being of the buyer or her family. I would learn all these reasons for buying and I wouldn't waste time talking about the weather, another brand of merchandise, or the cost of putting on two extra coats of paint!"

Dependable electric service was the main point of another housewife as she sought to advise salesmen on "approach shots." Her advice:

ELECTRICITY'S SERVICE

"If I were selling electrical appliances, I believe I would stress the dependability of electric service. I

don't know how it is in other cities but in Dallas we have electric power at our fingertips day and night. I just flip a switch and there it is.

"The knowledge that I can depend on electricity continuously makes it of immense value to me. Electricity at any time is still a mystery to me but I think it is phenomenal that we are able to put it to work at will.

"I think all electrical appliance salesmen should emphasize the fact that this efficient servant is always at hand."

A third woman made time the important factor in advising:

DON'T WASTE TIME

"If I were selling electrical appliances, I would be considerate of the housewife's time. Too many salespeople persist in wasting my time and theirs. When I am busy and can't afford to take time to listen to people calling at my home I tell them so in no uncertain terms.

"Yet 90% continue to roll out what sounds suspiciously like a memorized speech. That not only makes me furious but I don't even hear half that is said. I can't bring myself to the point of closing the door in the middle of such a spiel but I often wish I could do just that.

"If I were selling, I would politely ask for an appointment at another time when Mrs. Housewife lets it be known that she can't waste time needed for other things. Of course I know some women use the 'rushed for time' excuse in an attempt to turn away all salesmen at the door, but I believe I could distinguish between the legitimate ones and the 'phonies.'

"If I were selling, I believe I would be more economical of my own time. I would not waste it in talking to a woman who hears only half of my sales talk. I would either try to see her another time or forget her entirely—and go on to those who do have time to listen."

This May Be the Answer To Effective Ironer Merchandising

Colorado Dealer Builds Story on Flatwork, Forgets Shirts and 'Fancy Pieces'

COLORADO SPRINGS, Col.—Solution to the ironer merchandising problem lies in selling this equipment on the basis of effectiveness in handling flatwork rather than in handling wearing apparel, in the opinion of Rob S. Brannon, manager of Hatch Music Co. here.

Like a good many other dealers, this firm formerly tried to sell ironers on the basis of the time and effort they would save in finishing shirts and similar items. But experience proved that this theme just didn't work.

After a salesman had given an elaborate sales talk on ironing shirts, the prospect usually asked him to demonstrate. Obviously the average salesman couldn't deliver in a demonstration of this kind. As a result, the customer lost confidence in what he had said and a potential sale was lost.

Today the Hatch company's entire ironer appeal is built around flat-

work. If the customer asks whether or not the ironer will handle shirts, the salesman gives her an affirmative reply, but he cautions the prospect that she must have considerable patience to learn how to finish shirts on an ironer. He then goes on to point out that even if she never learned to iron wearing apparel on the machine it still would prove an excellent investment, inasmuch as the bulk of the housewife's ironing is flatwork.

After completing a deal, the salesman cautions the customer not to attempt anything but the ironing of flatwork for at least three weeks. He points out that if the user will first perfect her technic on this simple type of ironing she will acquire much more rapidly the ability to handle wearing apparel.

To make certain that the customer is progressing properly with her flatwork and that she is thoroughly satisfied, at least one follow-up call

is made during the first month after the ironer is installed.

"The power company or a very large independent dealer who can retain his own home service demonstrator can talk shirt ironing and get away with it, but to the average small dealer this appeal is poison," says Mr. Brannon.

"It's all right to tell a customer that with sufficient practice she can successfully iron shirts. But from the standpoint of getting the sale, we must lay our emphasis on the more simple operations which any salesman can easily demonstrate to her satisfaction.

"Another thing that's helped our ironer business a great deal this year is the introduction of a low-priced unit. We're featuring a small \$39.50 model. We realize that it isn't the ultimate in ironers but we're using it as a means of creating public acceptance for the home ironer idea."

Old Style Trays have seen their Last Days...



IT'S INLAND ICE TRAYS FOR Maximum Convenience Minimum Cost



There's no doubt about it. These Inland ice trays relegate old style ice trays to obscurity. Today when you say ice cubes, in a flash you think of ice trays by Inland... for a few cubes or a brimming bowlful—instantly, full-sized and unshattered.

It's easy to demonstrate and sell the advantages of these fast-freezing, quick-releasing Magic Finish Ice Trays by Inland. For superswift, maximum convenience, it's the Shucker Tray, of course. And for the

quick-release feature at minimum cost, it's the Tilt Out Tray, beyond question. In other words, for original factory equipment by leading makers or for replacement sales by dealers, ice trays by Inland are first choice for every price and every purpose. For details, prices and discounts, write to

INLAND MANUFACTURING DIVISION
GENERAL MOTORS CORPORATION
DAYTON, OHIO CLARK, NEW JERSEY



Salesmen Cut Costs Or Make No Money

Paul Bodwell Supervises Every Sales Step In His Commercial Refrigeration Operation—and Keeps Profits Up By Paring Costs Down

By Robert M. Price

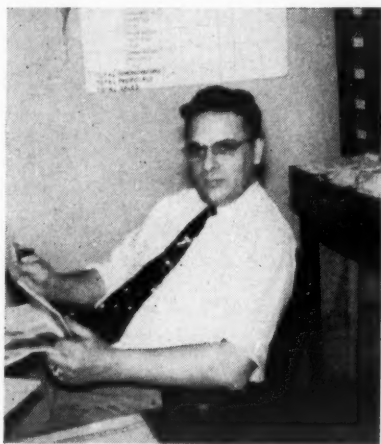
HARRISBURG, Pa.—Putting the earning power of his salesmen "right in their own hands," Paul Bodwell, head of Bodwell Co., Inc., Kelvinator commercial dealer here, keeps costs down and profits up on a business averaging \$150,000 a year. Commissions are based on a percentage of profit over installation and service costs on every job sold.

This system puts it squarely up to the salesmen in cutting corners on needless installation and service expense, Mr. Bodwell explains. Salesmen thus have a definite incentive to go all in their power to keep costs down, as their income on each job is measured on this factor.

To prevent salesmen from eliminating equipment needed to make the installation right, Mr. Bodwell works right with the salesmen on all proposals. Salesmen bring in all information on the job and from this complete data a proposal is prepared for presentation to the prospect. All engineering work and figuring of costs on the layout is done by Mr. Bodwell himself. When all the angles have been figured by the salesman and Mr. Bodwell, a selling price on the job is set by Mr. Bodwell.

Next step is to set up a service reserve for the job so that this figure plus equipment and installation charges can be subtracted from the selling price in arriving at the profit and so the commission paid the salesman.

Mr. Bodwell has a hand in every step taken from the first contact with the prospect down to the final installation of equipment. He prefers to work right along with salesmen



PAUL N. BODWELL

so that no point is overlooked in getting the best job at the least cost.

"I want this business no bigger than I can handle myself," Mr. Bodwell explained. "In fact, it is now a big one-man operation."

In addition to doing the engineering work on all jobs, Mr. Bodwell is his own sales manager, does his own bookkeeping, and plans the advertising program. The business, however, is divided into three separate depart-

ments—commercial sales, appliance sales, and installation and service.

As sales manager of the commercial department, which comprises about 85% of the firm's business, Mr. Bodwell takes care of the direct mail program and routes prospects to salesmen. In surveying the market for commercial business an information card is filled out by outside salesmen.

SURVEY CARDS USED

This card gives complete information on commercial jobs, air conditioning, and automatic heat. Tabs for each classification are on the top of this card. These tabs are perforated so that the salesmen may tear off index tabs except those showing equipment needed.

Tab cards are filed and the remaining tabs form a convenient index in routing salesmen for callbacks or for a direct mail piece on the particular piece of equipment indicated by these tabs.

In following up these prospects, Mr. Bodwell again steps in. Last year he closed half of all jobs himself. "I have been selling all my life," he explained, "and have 23 years' experience in refrigeration."

The household appliance department has two salesmen. Sales on domestic refrigerators average over the 200 unit mark a year. One salesman specializes in commercial refrigeration and air conditioning. Mr. Bodwell makes his selling weight felt in these lines. This year the firm took on a franchise for Temp-rite equipment and three men sell this equipment in the 10-county territory.

ALL-BRAND SERVICE

The service and installation department is headed up by a service manager who works with Mr. Bodwell in setting up service reserve costs for installations. The department offers 24-hour service and takes care of service on all equipment of all makes. This policy offers a valuable "entry" for new equipment and replacement sales.

Air conditioning work falls largely on Mr. Bodwell's shoulders.

"The only way we can make money on central station installations is to eliminate costs," Mr. Bodwell says. So, he does the engineering on all of these jobs, plus a large share of the actual selling. Contracts for certain work on these jobs are sublet.

"A multitude of little jobs is the life of this commercial business," Mr. Bodwell said. "We do a nice volume of business in cork insulation and refrigerator doors, for example." These extra income lines are sold by Mr. Bodwell himself.

Being the "seeing eye" for all parts of the business and taking part in every sale from promotion to closing gives Mr. Bodwell his own multitude of little jobs. But functioning as sales manager, engineer, bookkeeper, and salesman gives him the opportunity to work with salesmen in getting prospects, making proposals, and closing sales. Working together they can pare costs along the way to give salesmen a bigger income from lower expense.

Commercial Prospect Analysis

WATER COOLER		BEVERAGE COOLER		BEER COOLER		DISPLAY CASE		REACH-IN REFRIG.		STANDARD REFRIG.		AIR CONDITIONING		AUTOMATIC HEATING	
FIRM NAME _____															
ADDRESS _____ CITY _____															
PROPRIETOR _____ ANY PARTNER? _____ NUMBER OF EMPLOYEES _____															
QUARTERS LEASED () OWNED () HOW LONG IN PRESENT LOCATION? _____ PLANS TO STAY IN PRESENT LOCATION? _____															
THIS YEAR'S BUSINESS COMPARED WITH LAST _____ OUTLOOK FOR NEXT YEAR _____															
COMMERCIAL EQUIPMENT	PRESENT TYPE	WHEN PURCHASED	HAVE CONSIDERED NEW EQUIPMENT	PROSPECT FOR	REMARKS*										
WATER COOLERS															
BEVERAGE COOLERS															
BEER COOLERS															
DISPLAY CASES															
REACH-IN REFRIG.															
STD. COMMERCIAL															
AIR CONDITIONING															
AUTOMATIC HEAT															
FILED BY _____ DATE _____															
FORM NO. 284															

Cards like this are used by Bodwell Co., Inc., Kelvinator commercial dealer in Harrisburg, Pa., to keep complete records of the firm's prospects. Perforated tabs at the top are detached if the prospect is not in the market for that type of equipment.

California Super-Market Boasts Use of 10 Commercial Refrigeration Units

ALAMEDA, Calif.—"Plenty of refrigeration" is a major part of the formula used by George and Warren Sturtevant, in the operation of a large super-market here. The Alameda unit is one of a chain of four large stores, the outgrowth of one small establishment started a few years ago.

Shoppers visiting the G & W market, as the stores are known, find 10 commercial refrigeration units used for the display of meat, food, and beverages. Separate cases are used for seafoods, pork and lamb, beef, and general meat storage.

Dairy products are kept in a six-door reach-in refrigerator. Two other reach-in refrigerators placed back to back are used for other beverages.

Frosted foods are merchandised

from an 8-hole unit, and ice cream from a similar unit. One ice-cooled unit is used for marketing soft drinks.

C. A. Larson, manager of the store, asserts that placement of the various refrigerators is very important to merchandising in a self-serve market. Customers entering the store first pass by the meat counters, and then pass the dairy counter.

Mr. Larson points out that dairy products should not be kept in the same case with other beverages, as some people do not like to buy milk from a case which is used to cool other liquids—even if they are non-alcoholic.

The frosted foods and ice cream cabinets are located in the checking stand, and the store makes a point of pushing the frosted foods line.

Smith & Smith Replaces Smith & Berry In Ala.

BIRMINGHAM, Ala.—Smith & Smith Refrigeration Co. is a new concern recently opened at 1315 First Ave., North, Birmingham, superseding Smith & Berry Refrigeration Co., which is being liquidated.

Carlton P. Smith, for several years identified with the real estate, loan, and insurance business in Birmingham, is president and William T. (Bill) Smith, formerly identified with Smith & Berry, is vice president. The latter is a refrigerating engineer with some 17 years experience with the Frick Co.

The new concern will continue to distribute Frick and Koch products and do general engineering work.

Atlanta Division Paces Ga. Commercial Sales

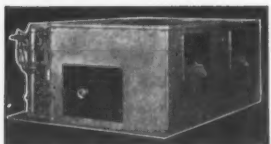
Power Company's 6-Month Volume Tops \$83,000

ATLANTA—Sales of commercial refrigeration equipment by salesmen for Georgia Power Co. totaled \$83,293.68 during the first six months of the year, a compilation recently made by the company reveals.

Atlanta, with sales of \$17,782.79, was leader during the period, with the Macon division only slightly behind with \$17,425.43. Other divisions lined up as follows: Augusta, \$14,926.07; Columbus, \$12,122.72; Rome, \$11,640.56; and Athens, \$9,396.11.

FOR the answer TO YOUR LOCKER PLANT FREEZING, COOLING AND HEATING EQUIPMENT

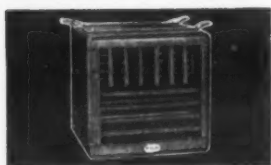
SEE *McQuay* FIRST



■ **McQUAY SUSPENDED ZERO-O-PAK**—Designed especially for use in large sharp freezer rooms of locker plant systems. Easily defrosted with air or water. No scraping of plates or pipe coils to remove expensive frost accumulation. Many satisfied users say . . . no fuss, no muss, no bother.



■ **McQUAY FLOOR TYPE ZER-O-PAK**—Designed to eliminate sharp freezer room in popular sized locker plant systems, giving added locker space. Easily defrosted by water. Can be used with or without duct systems.



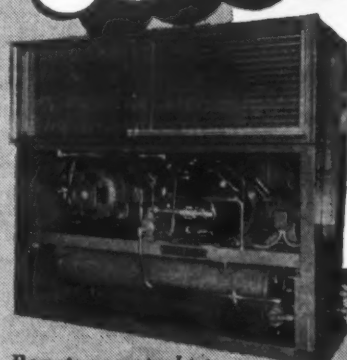
■ **McQUAY UNIT COOLER**—Provides ideal refrigeration for pre-cooling rooms and chill rooms. Patented three way deflector insures perfect air distribution. Available in complete range of sizes. New catalog now ready.



■ **McQUAY UNIT HEATERS**—Full floating all copper heating element with the exclusive McQuay Frictional Bond construction. New high efficiency silent fan. Ideal for heating requirements of locker plants. New bulletins describing complete line of types and sizes for steam, hot water and gas-fired applications now available.

McQuay Inc., 1607 Broadway St., Minneapolis, Minnesota.

CURTIS Packaged Air Conditioners
Offer Your Customers
EFFECTIVE, EFFICIENT, LOW-COST COOLING



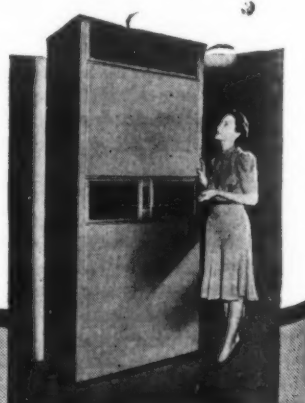
Remote or central type air conditioner—7½, 10 and 15 ton sizes

- Units are self-contained, semi-portable, easily moved
- Can be installed in one day without disturbing fixtures
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- Low first cost—readily financed
- Maximum efficiency—quiet, economical operation
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Get your share of the growing sales and profits in the packaged air conditioning field. For full information write to Curtis today.

CURTIS REFRIGERATING MACHINE CO.

Division of Curtis Manufacturing Co.
1930 Kienlen Avenue
St. Louis, Missouri
Established 1854



Packaged type store cooler—3 and 5 ton sizes

McQuay INC. REFRIGERATION AND AIR CONDITIONING EQUIPMENT

Difference In Dress Plagues Engineers

(Concluded from Page 1, Column 4)

Men dressed in women's summer clothing, weighing 1.8 lbs., including shoes, as compared with 5 lbs. for men's summer wear, demanded a temperature of 80°, which was about the same as that preferred by women (79.5°) similarly dressed.

"Conversely, when women wore men's winter clothes, weighing 8.3 lbs. instead of 2.6 lbs., the average weight for women's winter garb, the comfortable air temperature went down to 70.5°, which is a degree lower than that preferred by men wearing the same clothes.

WOMEN WARM UP

"Two of the most cold-susceptible women in the group, who shivered in a room of 70.5° when dressed in their customary winter clothes, felt comfortable at the same temperature after changing to men's winter clothes. Gradually, the skin temperature of their feet and arms increased about 6°; that of the legs and trunk rose 2.5°; and that of the hands and head 1°. The mean skin temperature of the body as a whole rose from 88.4° to 91.6°, and the mean surface temperature of clothes dropped from 82.8° to 79.6° F.

"In almost all instances, comfort was associated with a mean skin temperature between 91.5° to 93° F. in both men and women, regardless of air temperature (53.5 to 84° F.), amount of clothing worn (0 to 16.2 lbs.), and season of the year in which the experiments were carried out.

"On the other hand, the mean surface temperature of clothes and exposed skin varied from 67.6° to 91.9° under comfortable conditions. The wearing of additional clothes always increased the skin temperature of all parts of the body, the covered or exposed, and decreased the surface temperature of clothes."

SOMETHING MUST CHANGE

The conclusion to be drawn from these tests, Prof. Yaglou declared, is that differences of comfort standards between men and women, and individual differences, are primarily due to differences in dress, and could be reconciled by adjustments of clothing, according to susceptibility to cold or heat.

"If women would dress in winter with clothes that are comparable in warmth to those of men, they would be comfortable in a temperature of about 70° F., instead of 76° F. at present, and there would be less discord in the matter of room temperature.

"Reversely, if men would take off their vests, coats, and collars, in hot weather, buildings would not have to be cooled much below 85°, instead of 76° to 80° F. at present, and much of the difficulty now experienced with temperature contrasts would be alleviated.

"Reconciliation of the double temperature standard would also greatly simplify the problem of the engineer and would reduce the expense of heating and cooling buildings."

9 Stores In One Building To Be Air Conditioned

BIRMINGHAM, Ala.—Shook & Fletcher Supply Co., Carrier distributor, has been awarded a \$19,785 contract to air condition nine new stores on the ground floor of the Frank Nelson building here. These include two hat shops, a men's clothing, a shoe store, a jeweler, a soda and lunch stand, a gift shop, a building and loan association, and a small loan agency.

Army Air Post Gets Cooling

SAN BERNARDINO, Calif.—J. D. Trammel, 483 "E" St., was low bidder for an air conditioning system to be installed at the U. S. Army Air Field (March Field) Riverside.

Summer Attendance At Business College Boosted By Cooling

MINNEAPOLIS—Summer attendance has been boosted 200% in the Minneapolis Business College here by the use of an air conditioning system which has been in service for the past five years. Previous to the installation of air conditioning, the school's summer attendance was never more than 150, or 19% of capacity, but the attendance today is nearly 60%, which is considered excellent for the hot months.

The school occupies 16 outside rooms on the second floor of a downtown building, and each room is under automatic control for both heating and cooling. This individual control was necessary because of the constant fluctuation of the number of students in any one room.

Cooling is provided by an 80-ton General Electric conditioner using artesian water, plus a 20-hp. G-E mechanical refrigeration system.

J. H. Mosher, head of the school, states that air conditioning permits all windows to be kept closed, and that elimination of street noise has improved both teaching and scholarship. Mr. Mosher also asserts that the year-around attendance at the business college has been increasing steadily since the system was first installed.

Newspaper Building Has 'Zone' Control

TULSA, Okla.—Thermostatic control of individual refrigeration units is used to regulate temperatures in the various "zones" in the air conditioning system recently installed in the Tulsa Tribune building here.

V. L. Strange, manager of General Air Conditioning Co. here, states that this method, which permits a constant flow of air to all parts of the building, is more satisfactory than control of the air by means of motor dampers.

Conditioning is supplied by General Electric compressors, evaporative condensers, and fan-coil units which serve each zone in the building.

The system extends to the editorial, advertising, business, and circulation departments, which occupy all of the fourth floor and parts of the second and fifth floors of the five-story building.

Richard L. Jones, Jr., general manager of the newspaper, states that the company plans to extend the system to other parts of the building, including the mechanical departments.

Minute Movies
KEEPS FLOWERS
MORE HOURS
Bush Mfg. Co.
HARTFORD, CONN.
BRANCH FACTORY
210 N. WABASH BLVD. CHICAGO, ILL.

Self-Contained Units Lead Sales Gain Over 1939

WASHINGTON, D. C.—Orders for air conditioning systems and equipment for summer and year-around use booked during May amounted to \$2,675,286, as compared with \$2,425,139 in April and \$2,733,706 in May of last year, according to reports by 51 U. S. manufacturers to the Bureau of the Census, Department of Commerce.

For the first five months of this year, orders by these manufacturers amounted to \$9,319,218, as compared with \$9,010,541 last year.

Leading individual equipment in volume during May were self-contained room and store coolers, orders for which totaled \$1,082,596, as compared with \$649,917 in April and \$832,860 in May last year. For the first five months of the year, orders for this equipment amounted to \$2,477,640, against \$1,866,366 in the same 1939 period.

Self-contained systems between 1 and 5 hp. led in volume during May as well as in the year's first five months. May orders totaled \$470,699, and those for the five-month period were \$1,154,218. Units under 1 hp. had the next largest volume, with \$432,975 for May and \$906,712 so far this year.

Orders for central-station systems for summer cooling amounted to \$394,045 during May, and \$2,092,946 during the first five months of the year. This figure, however, also includes installation costs. Year-around equipment of the central-station type showed orders for the five-month period totaling \$360,362 for human comfort and \$521,138 for industrial systems.

Condensing Units Over 50-Hp. Lose Ground As Smaller Systems Stabilize Totals

Item	May, 1940	May, 1939	Total, 5 Months (January-May) 1940	Total, 5 Months (January-May) 1939
Air conditioning systems and accessory equipment, total	\$2,675,286	\$2,733,706	\$9,319,218	\$9,010,541
Air conditioning systems primarily for summer use (which may include heating coil and humidifier):				
Systems for installation in room or rooms to be conditioned:				
Self-contained:				
Up to and including 1 hp.	432,975	251,887	906,712	647,973
Over 1 hp. up to and including 5 hp.	470,699	439,321	1,154,218	956,414
Over 5 hp.	178,922	141,652	416,710	261,979
Not self-contained, same as above excluding refrigerating unit	82,347	222,622	511,569	597,052
Evaporative cooling systems:				
Direct	41,707	•	87,677	•
Indirect	•	•	1,979	•
Water cooled systems using direct circulation of water, 65° or colder	22,391	†	46,569	†
Central station systems (including cost of installation, if to be installed):				
For human comfort	394,045	224,503	2,092,946	1,726,406
For industrial use (including humidity control)	37,246	38,271	121,193	64,432
Year-around air conditioning central station systems (including cost of installation, if to be installed):				
For human comfort	57,317	112,125	360,362	664,424
For industrial use	247,739	237,105	521,138	539,448
Component units of air conditioning systems (other than furnaces) for sale separately:				
Refrigerating or cooling units for sale for air conditioning systems:				
Under 1 hp.	35,631	34,244	119,288	97,611
1 hp. and over but under 10 hp.	125,029	164,638	417,991	392,901
10 hp. and over but under 25 hp.	139,737	144,712	421,411	415,801
25 hp. and over but under 50 hp.	53,933	91,842	250,751	358,482
50 hp. and over	115,453	250,654	1,045,240	891,827
Condensers:				
Shell and coil or shell and tube	8,423	8,004	29,051	70,618
Evaporative type	72,966	34,520	245,284	236,556
Coils for direct expansion	47,699	119,495	196,037	164,472
Units consisting of heat transfer coils, air cleaner, blower, humidifying and dehumidifying equipment	111,027	140,111	373,092	439,145

*Comparable data not available. †Not called for on schedule. ‡Not strictly comparable; reported as "Heat transfer coils and coils for direct expansion" for 1939.

Meet the DEMAND for
COMFORT COOLING
with
Fedders
Fed-Air-Kool Unit Coolers using refrigerant or water
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★ Beautiful, new smart styling... cool, attractive color... maroon inlaid chromium trim... harmoniously fits into modern room design and decorative scheme... suspended from ceiling... out of the way.

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"Beauty is only skin deep"... but under the lustrous silver surface of these sensational new Servel units, you'll find a degree of performance, economy and noise-



lessness never before available in low-pressure refrigeration. Write today for details. Servel, Inc., Electric Refrigeration and Air Conditioning Div., Evansville, Ind.

AIR CONDITIONING & REFRIGERATION NEWS

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F. M. COCKRELL, Founder

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JULY 24, 1940

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Defense Value Of Locker Storage Plants

ROGER SPRAGUE of the Baker Ice Machine Co. has just written us concerning a matter which should be vital when it comes to planning for the defense of any nation against possible invaders.

This matter is the coordination of LOCKER STORAGE PLANTS for the effective feeding of the people in time of war.

"The swiftly moving events brought about by the devastating European War has clearly shown the need of augmenting and building up a great food reserve, conservation, supply, and distribution system," writes Mr. Sprague.

Already 2,700 Such Plants In Operation

There are now established, he points out, close to 2,700 locker storage plants, "operating as an economical and requisite service, appreciated by many thousands of patrons from the Pacific Northwest to the Eastern shores."

These plants are, for the most part, well equipped food processing, storing, and distribution centers, serving the needs of the communities in which they are established.

Each Locker Plant Is Self-Contained Unit

Each plant is a unitary food station, maintaining all the essential features and equipment for handling and preserving meats, fruits, vegetables, and other perishable food products.

In any national crisis they would be of inestimable value—particularly if extended into areas now poorly covered by such service—because they could form a network of separate supply and distributing depots all strategically located.

By means of their use, food supplies for the civilian population—as well as for military units—could be furnished uninterruptedly

everywhere even though certain sections of this vast nation might be occupied or devastated by invading forces.

Interruption of Transportation Facilities Causes Famine

Had France and Belgium possessed such a string of locker storage plants, their refugee populations would not now be in so pitiable a plight. It is said that because of the bombing of bridges and railroads, people are starving in many sections, even though there is a sufficiency of food on hand for all at the present time.

Declares Mr. Sprague:

"We have today in our locker plants a system of food service never before available to a nation in time of war. This line of defense, in case of war or emergency, will be found more potent, workable, and of practical use, than the combined Maginot or Siegfried lines. Shall we coordinate America's greatest food defense line into a national scheme, or shall we, too, miss the bus?"

Possibility of Invasion Remote; Preparedness Makes Peace Probable

Although the possibility of the invasion of the United States seems remote at this time, it is true that Americans everywhere are united in the idea that we should rearm as rapidly as possible, in order to present to the world so formidable a defense that no unfriendly power would ever think of attempting to land troops on our soil.

Toward this end we are building a two-ocean navy, we are setting up plants to manufacture smokeless powder, armor plate, and other munitions, and we are expanding our aircraft industries. All these moves will be potent dissuaders of the war lords.

England Leads Way In Decentralization

However, decentralization of industries and of supply sources should be of immense value, too, in discouraging foreign military staffs from even contemplating solutions to the enormous military problem of invading the United States.

For the last year and a half England has been decentralizing its industries (the "shadow factory" plan), and establishing food depots with refrigeration facilities at hundreds of strategic points.

If this should seem important to the English, how much more important it should seem to the United States, with its vast expanses of territory.

Already Have Good Start; Could Button It Up Cheaply

Already, as Mr. Sprague points out, we have an excellent start toward a system of decentralized food supply depots. To finish the job would require only an infinitesimal fraction of the money we are now appropriating to build more battleships.

Here is an idea that should be promoted at every opportunity by members of the refrigeration industry. And now, while the whole nation is so keen on building up our defenses, is the time to do it.

They'll Do It Every Time . . . By Jimmy Harlo



THANKS TO
GERTRUDE NOAK,
IRVINGTON, N.J.
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LETTERS

He Speaks Up For Cellar Work Shop Type of Inventor

York Ice Machinery Corp.
York, Pa.

Editor:

The editorial "Encourage The Inventors" in the June 26 issue of the News certainly expresses my sentiments.

The principal burden of inventions and developments now, and for some time to come, will be borne by the research and development departments of manufacturing concerns. However, these organizations sometimes "can't see the woods for the trees." They become accustomed to certain methods and are not receptive to radical departures from these methods.

I should like to say something in favor of the "cellar work shop developer." He receives little credit for his accomplishments because of two inherent faults:

1. His imagination, which enables him to invent, also causes him to overestimate and exaggerate the value of his invention.

2. He leaves his invention unfinished and without thorough practical application.

However, we should not condemn them for these faults, but should take their creations and, with our practical experience, convert them into something practical and useful.

There was a general condemnation of an explosive recently invented because it did not measure up to the claims of the inventor. The public completely overlooked the fact that this explosive was superior in several respects to the best explosive in general use. Thus, the benefit of this invention may be overlooked for some time to come, or completely forgotten.

Another inventor developed a blower which possessed certain very desirable features but was clumsy, expensive to manufacture, and noisy. All attempts to market this device failed. Yet the faults of the invention were such that, with the experience of the manufacturers, they could have been overcome easily and quickly. Thus the manufacturer could have had a fast selling specialty and the inventor could have been reimbursed for the time and money spent on the invention. But this invention is still "on the shelf."

It would pay manufacturers and distributors to recognize the fact that there is merit in every invention—every idea. Jealousy usually prevents developments of the lone inventor from going into production. Or, sometimes, manufacturers are so unscrupulous as to seize the basic idea of the invention and use it without remuneration to the inventor. More often the manufacturer's own personnel, feeling that the admission of merit constitutes a reflection upon their ingenuity, condemn the invention and preserve their sanctity.

Cooperation between individual inventors and research and development

departments of manufacturers and distributors represents the finest possible solution. However, this idea may be Utopian. Eventually we may find a trend toward independent research and development organizations. Such an organization guides the inventive genius of the individual, through the benefit of broad experience, in making the invention practical and carefully measuring its possibilities toward making a lasting impression upon the manufacturer or marketing organization.

C. LOVETT WYCHE,
Assistant Manager,
Accessory Equipment & Supplies Div.

More Expressions on Passing of F. M. C.

O. C. Small

National Electrical Manufacturers
Association
155 East 44th St.
New York, N. Y.

Dear Mr. Taubeneck:

I was very shocked to learn that my old and good friend, Frank Cockrell, had passed away. You would have heard from me before but I have been away for some time and have just had the privilege of reading the editorial you wrote about him in the May 29 issue of your publication and the details of his life appearing in the same issue. I subscribe to everything you said about his integrity, his forcefulness, and his independence. To say I am shocked at his death is to put it mildly.

It was my privilege to meet Mrs. Cockrell some years ago and I would appreciate your extending to her my deepest sympathy in her loss. The last time I saw Miss Cockrell, she was a little girl in short frocks and, realizing then the bond existing between her and her father, I can appreciate what a loss it must be to both her and her mother.

O. C. SMALL, Manager,
Business Development Department

F. J. Hood

Ansul Chemical Co.
Marinette, Wis.

Dear George:

We all here at Ansul were shocked to hear the news of Frank Cockrell's death. I do not know any one in the industry who commanded and received more respect for his ability and generosity in helping to build the refrigeration industry than Frank did. We all loved and respected him and it is needless to say that he will be greatly missed.

I know that this has come at a very bad time for you and unquestionably has taken some of the edge off of your marriage. I sincerely hope that you will not let it interfere with the true happiness that you so rightfully deserve.

May I congratulate you very highly on being made the new publisher and editor of AIR CONDITIONING & REFRIGERATION NEWS and president of the Business News Publishing Co. You can rest assured that all of us here at Ansul are for you and ask that you only call on us to give us an opportunity to demonstrate our sincerity of this statement.

Wishing you all the luck in the world and with kindest personal regards.

F. J. HOOD,
Secretary

L. B. Miller

Perfex Corp.
415 W. Oklahoma Place
Milwaukee, Wis.

Dear Jim:

Upon returning from a trip this week, I picked up an issue of the News advising of the sudden and tragic death of Mr. Cockrell.

It does not require a slight stretch of the imagination to appreciate the shock that must have been experienced by you and the rest of the boys in the organization.

Personally, from the time that I first met Mr. Cockrell, several years ago, I have had a most genuine respect for his ability and personality and more than all, for the work he has done in the refrigeration industry. I want to extend my sympathy to you, Phil Redeker, George Taubeneck, and the other boys in the organization in connection with your loss. I know it is going to be a long time before the wound will be healed but there is consolation in the pleasant memories you have of such a happy association. I was never privileged to meet Mrs. Cockrell or the daughter but even so, you might extend to them my sympathy also.

With kindest personal regards, I am

L. B. MILLER

Hal MacPherson

The Electrimatic Corp.
2100 Indiana Ave.
Chicago, Ill.

Editor:

We want to express to yourself and staff our sympathy in loss of your Mr. Cockrell. While there is no probability of actually replacing him, we feel quite confident that the present staff of Business News can carry on the very worthwhile work, which your publication is contributing to the industry.

We trust things are going well with you personally, and look forward to seeing you some time in the not too distant future.

HAL MACPHERSON

Thos. Carraway

3636 Lovers Lane
Dallas, Tex.

Editor:

May I kindly ask your pardon for this belated message which was occasioned by my absence from Dallas—and most periodicals—for the past few weeks.

I have a vivid memory of the pleasant evening that I spent in Detroit as a guest of The Business News Publishing Co., of which Mr. Cockrell was the life of the party.

The news that Mr. Cockrell passed away is indeed shocking! My admiration and wholesome respect for him has grown with the flight of years—October, 1925—and I wish to extend my deepest sympathy to Mrs. and Miss Cockrell and his loyal friends comprising the personnel of the AIR CONDITIONING & REFRIGERATION NEWS.

THOMAS W. CARRAWAY

Operating Problems Command Attention At Meeting of Michigan Locker Group

Preparation of Foods For Freezing, Legislative Restrictions, & Profit Possibilities Discussed

EATON RAPIDS, Mich.—About 150 locker owners and operators, both present and prospective, were guests of Manley Card, owner of Warehouse Lockers here, when the Michigan Refrigerated Food Locker Association held its quarterly meeting in Eaton Rapids, July 17.

Business sessions of the meeting, which started early in the afternoon, were held in the Card plant. Byron Watson of Bad Axe, president of the association, presided.

Speakers at the meeting included Prof. Seaton and Professor Blakeslee from the department of animal husbandry, Michigan State College; Mr. Davis, director of the bureau of foods and standards, Michigan Department of Agriculture; and Neal Banter, sales manager, Lindley Box & Paper Co., Marion, Ind.

The professors discussed the selection and preparation of foods for freezing, highlighting their remarks with references to the numerous experiments which they have conducted at the college.

HOW ABOUT LICENSES?

Mr. Davis explained the situation in regard to sausage making and canning licenses, telling the operators under just what conditions such licenses were required. Another member of the department urged the locker operators to become more promotion-minded. He suggested that they cooperate closely with the newspapers in their respective vicinities in the matter of advertising and publicity, and informed them that the state's department of agriculture was willing to help spread the gospel of locker storage in any way it could.

Substance of Mr. Banter's talk was that it's not so much the number of lockers rented as the poundage turnover of produce in the plant that determines the amount of profit for the operator.

Basing his calculations on the theory that the biggest profit possibilities of any locker plant lie in processing charges rather than locker

rentals, Mr. Banter urged his listeners to keep careful check on the poundage going through each locker, and to try to get all renters on a real volume basis.

Emphasizing the importance of conserving locker space, Mr. Banter pointed out that proper packaging was one means of accomplishing this end.

TALKING IT OVER

The entire meeting was of informal nature, and was spiced with frequent impromptu discussions of some of the problems besetting the attending operators. Service of refrigeration equipment was one subject which occasioned considerable comment in these discussions. Protection through both blanket service and inspection contracts and through special insurance was debated. Possibility of lowered rates through some sort of group action on this matter was considered.

After the close of the general meeting, directors and officers of the group held a closed session while the bulk of the conference-goers adjourned to a picnic supper served in one of the town parks located on an island in the Grand River.

Following the supper the group was formally welcomed to Eaton Rapids by the town's mayor and the secretary of the local chamber of commerce. Hans Kardell, county agent of Eaton County, also extended greetings.

Discussion of proposed legislative action, reading and acceptance of a combined code of ethics and certificate of membership drawn up by John Vogt of Fowlerville, one of the association's directors, and selection of Plymouth as the site of the group's October meeting concluded the program.

President Watson urged as many members as possible to plan on attending the convention of the national locker operators' association scheduled to be held next October in Chicago.

Locker Plant Insurance Affords Quarterly Inspections, Protection Against All Loss

NEW YORK CITY—Protection against the locker plant operator's nightmare of breakdown of his refrigerating equipment is now available in the form of specialized insurance policies including regular periodic inspection of all such equipment.

One of the companies offering this type of insurance is the Fidelity & Casualty Co. of New York, with headquarters in New York City and branches in various parts of the country.

Briefly, the coverage obtainable through this company provides for indemnity against the following kinds of loss caused by an accident to the described equipment:

1. Refrigerating equipment (including motor or engine, compressor, piping and vessels containing refrigerant, and piping containing brine).

2. All other property lost or damaged in a direct manner, including liability for such damage to property of others.

3. Loss of products spoiled from lack of refrigeration (including owner's or operator's products and products of others for which owner or operator may be liable).

As a supplement to policies of this type, and as a further safeguard against breakdown or shutdown, the company furnishes a quarterly inspection service made by men with long training and experience in checking all kinds of mechanical equipment.

Rates for insurance of this type depend entirely upon the size and type of plant to be insured. As a result, no arbitrary figure can be given, and further information should be obtained from the company or one of its branches.

Plant Promoted

GLENWOOD, Wis.—The Glenwood City Co-op. Refrigerated Locker Association, an organization formed for the purpose of promoting a refrigerated locker storage plant here, is now selling shares and soon will take bids for equipment.

Site Selected

FREMONT, Neb.—Building site for a refrigerated locker plant to be erected at Fourth and Broad Sts. here has been purchased by John C. Hammang of Arlington, Neb. Plans for construction of the plant are now underway.

'Cry-O-Vac' Packaging Units Made Available

CAMBRIDGE, Mass.—Special locker plant packaging units enabling operators to package meats and other foods in "Cry-O-Vac" bags have been made available by Dewey & Almy Chemical Co. here.

The Cry-O-Vac locker plant unit contains a motor and vacuum pump for creating a vacuum in the reservoir tank, a master vacuumizing can, and holders for other cans.

In literature addressed to locker plant operators, Dewey & Almy points out that its bags minimize dehydration of frozen foods.

Locker System Incorporates

PEPIN, Wis.—Articles of incorporation have been filed here by the Lund Locker System. Incorporators are E. T. Mattson, F. B. Johnson, and V. M. Mattson.

Egg Depot and Storage Plant Built In Tulsa

TULSA, Okla.—An egg depot and cold storage plant equipped with two automatic, electrically operated cooling units and compressor has just been built by L. E. Whitenack, owner of The Egg House here.

This storage plant was designed to operate at a constant temperature, for maintaining the eggs in the best condition for 30 days unattended, said Mr. Whitenack, who heretofore has been trucking eggs into Tulsa from egg depots in nearby states.

Filling Stations Too?

ELLSWORTH, Wis.—George Hansen, proprietor of Hansen's Filling Station here, is planning to expand his business by erecting a 250-locker cold storage plant in connection with his filling station.

Pleased By Locker Units, Owner Repeats Order

NORTHFIELD, Minn.—So satisfied was W. E. Johnson & Co. with the Model L-3 McQuay Low-Temp unit and the Model 2THW, 3-hp. York "Freon" compressor that had been in operation for about a year in the company's 260-locker cold storage plant here, that when Mr. Johnson decided to enlarge his plant by addition of 195 lockers he merely put in a repeat order.

D. C. Warfield of Westerlin & Campbell Co., St. Paul, received this repeat order, just as he had the original one a year ago.

Creamery Plans For Lockers

PERHAM, Minn.—Perham Co-operative Creamery Association is planning installation of a refrigerated locker plant here.

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	PAR	WHITE-RODGERS	CONTROL A	CONTROL B
ADJUSTMENT White-Rodgers uniformly-calibrated dials and instantly set differential permit quick, accurate setting of temperature.	15	15 ✓		
BROAD RANGE In a single White-Rodgers Control a completely calibrated temperature range of 70° is available to cover many installations.	14	14 ✓		
HYDRAULIC ACTION Exclusively in White-Rodgers Controls—uniform rate of expansion of solid-liquid charge results in positive accuracy at all temperatures.	15	15 ✓		
POSITION White-Rodgers Controls operate accurately in any position — and with control above or below bulb.	15	15 ✓		
LOAD CAPACITY High rating of Hydraulic-Action Controls eliminates necessity of a relay on many installations.	14	14 ✓		
RUGGED SWITCH Hydraulic-Action allows White-Rodgers Controls to incorporate an unusually rugged snap-action switch mechanism for long life and positive action.	12	12 ✓		
AMBIENT TEMPERATURE EFFECT Accuracy of White-Rodgers Controls is not effected by temperature variation at switch or capillary location.	15	15 ✓		
OTHER FEATURES (Your Selection) 1. 2. 3. 4.				
TOTAL	100	100		

Rate the important features of the temperature controls you are using and see for yourself why so many refrigeration men have adopted White-Rodgers Hydraulic-Action Controls!

TYPE 1609
Hydraulic-Action for general applications. Range -20° to +50° F. Adjustable differential 3° to 25° F.



TYPE 1629
Hydraulic-Action, Selective Range Control. Covers any 10° within range of 20° to 75° F.



Add up the score! You will find that White-Rodgers uniformly-calibrated dial, broad temperature range, positive hydraulic action, higher current rating, ease of installation and many other outstanding features give you a temperature control with distinct advantages — advantages which you as a refrigeration man cannot afford to overlook. Write today for your copy of the new White-Rodgers Condensed Refrigeration Catalog, Unit R-299, and learn what White-Rodgers Refrigeration Controls can do for your business!

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Efficient Service Department Is Seen as Key To Customer Satisfaction and Repeat Sales

Harrisburg Firm Shows Big Appliance Stores How To Cut Ratio of Service Cost To Sales

By Robert M. Price

HARRISBURG, Pa. — Showing stores how to increase their profits on major appliances with good service at less cost, Harold O. Bishop, head of Electrical Service Co., service specialists with branches in Harrisburg, Reading, and Lancaster, Pa., has built a business that employs 40 service men with calls averaging 500 a day in the peak season.

Major part of the firm's service business is done on a per call or percentage of sales basis for appliance and department stores. The company takes over service on all appliances sold by the store, service men being trained to do service work in all lines sold.

Mr. Bishop has been called in as "service doctor" for stores in all parts of the country. He maintains that the service department of a store is one of the most important means of keeping customers. Many stores, he points out, discount the service department as a necessary evil and in so doing discard the service department as the best "user getter" available.

"The service man," Mr. Bishop says, "can be trained to be an ambassador of goodwill, a diplomat to gain favor and continued business for the store he represents. Stores frequently lose customers permanently because they give poor service. Selling appliances is different from selling other merchandise. They cannot be sold and forgotten. It is up to the service department to keep them sold, to keep the customer's goodwill."

"Often," he continued, "the service man is the store's last contact with the customer. If he leaves a good impression by giving quick and efficient service, the chance of this customer coming back to the store to buy is immeasurably increased."

SERVICE COST RATIO

Called in to make a survey of a store's service department, as Mr. Bishop frequently is, he first points out that money saved on service is money added to the net profit on appliance sales. He compares the service cost against gross sales. The ratio of net service costs to gross sales is often surprisingly high, Mr. Bishop reports.

As an example, Mr. Bishop made a survey for a large department store chain. A branch in the middle west had a gross sales volume of \$41,000 for one month. Servicing this merchandise sold cost the store \$3,363. They collected from customers \$211 for service, giving a net service cost of \$3,152 with a ratio of service expense to gross sales of 7.2%.

This store adopted Mr. Bishop's recommendations for cutting service costs and a survey for the same month the following year showed the ratio of net service costs to gross sales had been reduced to 4.3%.

Another department store surveyed showed the ratio of net service expense to gross sales was 9% for a certain period. The store's appliance department operated at a loss of 2% for the year.

"Proper attention to service costs would have pulled this department out of the red," Mr. Bishop pointed out.

"If department stores and appliance stores could pay for service only when they needed it, they wouldn't have to employ so many service men," Mr. Bishop says. By offering his firm's service men to fit the store's service needs, Mr. Bishop offers to cut the ratio of service costs to gross sales.

COMPLETE SURVEY

When Electrical Service Co. is called in to take over the service for a store, a survey of the territory sold by the store is made and the number and kind of appliances in use are recorded. A per call rate is then worked out for the store. This usually runs around \$1.25 per call with mileage charges starting after 10 miles. Parts are furnished at cost plus 20%. The store may prefer

to stock its own parts, in which case no additional parts charge is added.

The mistake most stores make in service is lack of supervision, according to Mr. Bishop.

"Many service departments 'run themselves,'" he says, "with resultant inefficiency in time and direction. Each of our branches has a service manager who supervises all service work, routing men, and keeping the number of calls per man up to the desired level."

Duplication of routes in servicing appliances is one of the largest contributing factors in increasing service costs, Mr. Bishop believes. He requires his service men to be versatile enough to service all appliances in a given district. The territory is laid out in sections and any service call on any appliance is taken care of by the man or crew assigned to that section. This system greatly reduces mileage costs and completed calls are increased.

EDUCATIONAL PROGRAM

To train his service men in all lines of service work, Mr. Bishop has a broad educational program for his men. Men best versed in a certain line of service give instructions, and in turn learn servicing of other appliances. This adapts the men to the seasonal trends in service work. For instance, a refrigerator servicing man can be used in heating service work in the fall and winter.

'Service Doctor'



HAROLD O. BISHOP

while in peak refrigeration service periods men can be shifted to meet the demand.

In selecting his service men, Mr. Bishop prefers to get young men who have had training in radio service work. He has found it easier to train these men in all lines of service work. "I want to train them my way," he says.

He has proved to many store owners that an outside service organization gives them better service at less cost. Most stores, he believes, are not set up to handle service. Very often the volume of business in appliances does not warrant the setting up of a shop, does not have proper supervision, nor the proper personnel for servicing all appliances sold.

In Harrisburg a cooperative plan to handle service for a number of stores was tried. All service was taken care of by Electrical Service Co. The larger stores paid a percentage of gross sales for service. Smaller stores operated on a per call basis. The advantages of the plan, according to Mr. Bishop, are no mileage charges, no overtime to pay, no compensation, and no worry as to obtaining competent men in rush seasons.

SERVICE DIPLOMACY

Big worry of the store owners was that by employing an outside service organization they would lose important contact with the customer. To obviate that worry, Electrical Service Co. sends out their service men as representatives of the store for which service is being done. They are trained in diplomacy, says Mr. Bishop, and so become definite assets in cementing the store's goodwill.

When service is taken over for a store, each customer is checked for credit. The service man knows

exactly when she bought the appliance to be serviced. They make every effort to get payment for calls to increase the store's service income, thus reducing the all-important ratio of net service expense to gross sales.

The stores are usually billed for service every two weeks. They pay the difference between collections for service work and the bill entered by Electrical Service Co. When parts are sold, this income is credited to service.

Service men also act as salesmen for new appliances. This is offered as an extra service to the stores.

"For example," Mr. Bishop explained, "one of our men doing refrigerator service for a certain department store noticed that a big special on washers was being readied. He asked for tear sheets of the advertisement, took them out on his calls and tipped off customers to the washer special. This resulted in many extra sales traced to this man's missionary work. For this work, our men are instructed to refuse a proffered bonus. We want to keep our men thinking of service first, and offer these sales aids as part of our service to the store."

GETTING COSTS DOWN

"The trouble with most service outfits," Mr. Bishop stated, "is that they want to collect for every single thing they do. We never squawk for a dime. I believe that success in service is getting the cost down as far as possible. We show a store how to make savings on service, instead of trying to squeeze the last thin dime out of our service work."

In his consulting work on service, Mr. Bishop has "shopped" large department stores and chain stores to

show them how to cut their service costs. He has traced high service costs to salesmen's mistakes, careless delivery and installation, improper supervision of service men, and careless recording and routing of service calls.

For one large chain, he made a survey of several of their stores and outlined a service policy designed to save them money by providing supervision embracing his ideas of service. One point to provide service desk employees with a list of questions and answers pertaining to common service troubles. This was successful in eliminating unnecessary service calls, with resultant savings. Typical complaints phoned in were: "Gas fumes." The desk employee was instructed to have the service man call at once. An urgent complaint. Another common complaint was

that the refrigerator "doesn't run at all." The desk employee was instructed to have the customer check the fuse and socket, to ask the customer if a light worked in the socket, also, to check the pointer on the control. If this pointer was turned to "defrost," the customer was asked to turn it on again.

"Common complaints," Mr. Bishop pointed out, "very often were settled by this instructed service desk employee." Similar complaint and answer sheets were made up for other appliances.

"We don't 'sell' our service now," Mr. Bishop stated. "We now make a survey of the stores and tell them what they should have to improve their service and decrease their costs. We show them how we can save them money, and our men are trained to make good our offer."

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Compact Set-Up Saves Money In Cooling System Design

By Henry Knowlton

Beating the price bugaboo in the design of air conditioning systems often keeps application engineers awake nights. Instead of counting sheep, they try to figure out how to give the prospective owner a good job at a low price. In this process ideal engineering design is bounded by economic expediency—the "perfect" system gives way to one that the owner can afford.

The result is a compromise. By exercising an unusual amount of ingenuity, the application engineer is able to adapt a workable system—at a price which will induce the prospect to sign on the dotted line.

Design of a 10-ton system for a busy restaurant is a case in point. In this instance the owner had acquired a long lease on a corner location formerly used as a branch bank. With FHA (Title I) financing available for an improvement of permanent character, he wanted air conditioning—right away.

Like many owners of similar types of business, he was not interested in seeing how much mechanical equipment could be poured into a building he did not own. What he wanted was comfort for his patrons and employees, at a reasonable cost. Several air conditioning firms were consulted and asked to make estimates. Sales engineers who examined the building found one large room, measuring 54 by 42 feet with a 12-foot ceiling. A bar, used for customers and service, extended down one side of the room. Total seating capacity provided for 120 people.

Four light columns down the center of this room supported an "I" beam, concealed and plastered. (See drawings on this page.) Outside walls constructed of heavy masonry had to be considered, as openings would be expensive. The owner indicated a preference for a ductwork system, as window placement did not favor the use of two store cooling units.

LOW CEILING PROBLEM

An examination of the basement revealed this space to be something under 6 feet high, with not enough space for a man of average height to stand upright. Electric power service, water, and drain, were all located toward the front of the basement. Ceiling height did not permit the use of a self-contained central station package unit.

Several proposed layouts were offered, the majority of these calling for the erection of a "built-up" central station system in the basement, and running ductwork across the back of the room, down one side, or down the center. These methods were quite expensive, with relation to the size of the system and would also tend to spoil the appearance of the room.

One air conditioning sales engineer decided that he would offer the owner a system using 1. a self-contained central station unit in the basement of the building, and 2. an absolute minimum of ductwork. A survey of the room indicated that a

single 10-ton factory built unit would be satisfactory. (See load estimate table.)

The first apparent handicap was the low ceiling in the basement. Factory built central station units are higher than the available headroom. The application engineer determined, however, that by removing the fan section from the top of the unit and suspending it from the basement ceiling alongside the balance of the unit, there would be sufficient room to make the installation.

The two parts of the conditioner were then joined by a simple sheet metal connection.

An examination of the load sheet showed that approximately 25% (1,000 c.f.m.) would be necessary for proper ventilation in a room where 120 people might be smoking simultaneously. The fresh air connection could not be taken off the street because of the proximity to passing automobile traffic.

ALL DUCTS IN VESTIBULE

A solution to the problem of fresh air, conditioned air distribution, and return air, was found in a vestibule, flanked by two closets, located in the front corner of the building. One of these closets housed a phone booth, the other was used for storage space. Above the vestibule was ample space for the location of grilles, facing all sections of the large room.

Fresh air was obtained by running a duct up from the unit in the basement, through the storage closet, to a point outside the building just below the vestibule ceiling. This placed the air intake well above the street level and away from the fumes created by passing traffic. This duct measured 11 by 14 inches.

A conditioned air supply duct, measuring 18 by 24 inches, was also run up through this closet space and extended across the top of the vestibule. This duct supplies four special diffusing grilles with air at approximately 1,000 f.p.m. velocity. Because of the high ceiling, air at this velocity could be thrown out to all parts of the room without the creation of excessive drafts.

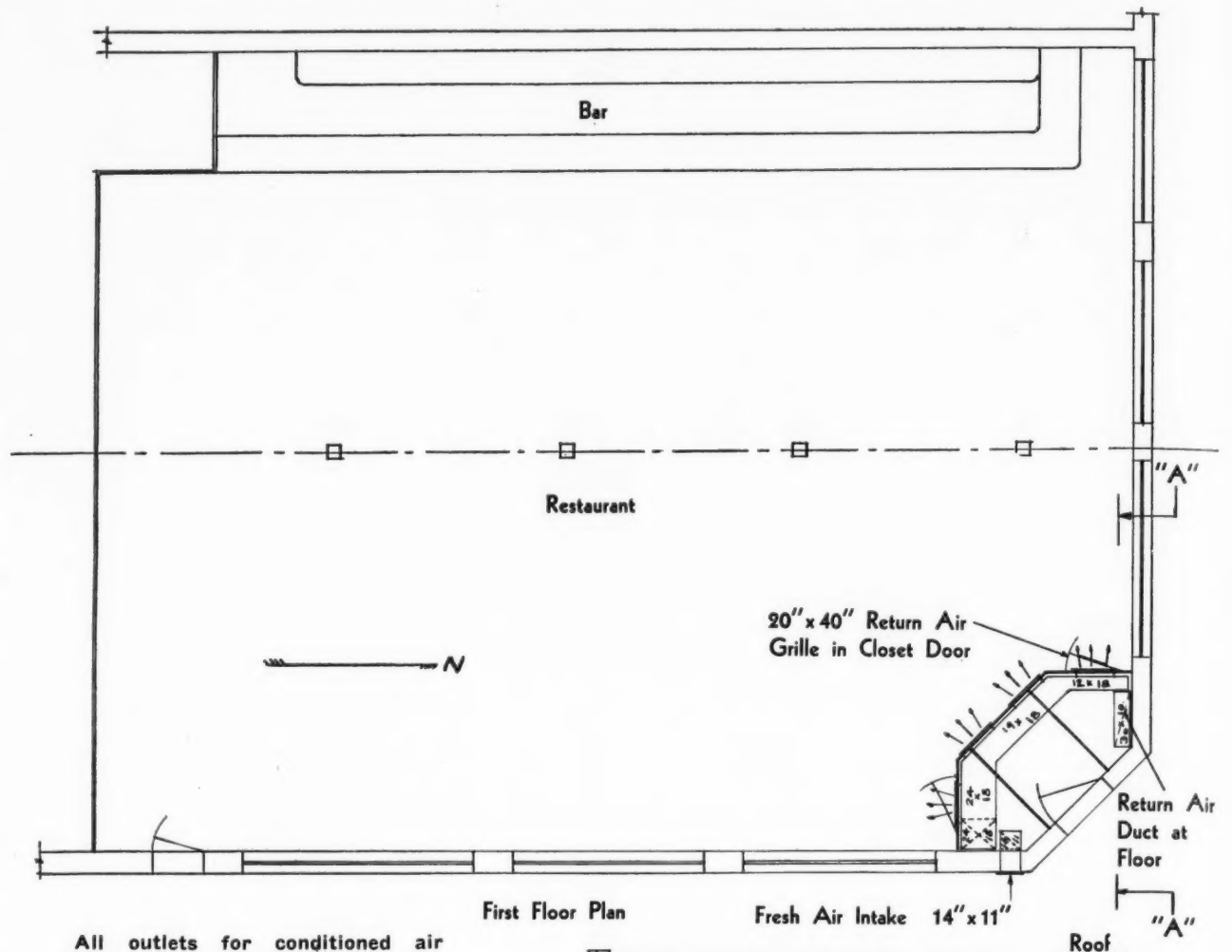
Walls above the vestibule were extended upward by plywood furring, completely enclosing the sheet metal work. Grilles were placed flush with this plywood, resulting in a clean, neat, finished appearance. This work was all done without disturbing any of the decorative scheme.

AIR COOLED PHONE BOOTH

The problem of getting return air was also difficult. Outside walls of the building near the conditioner were of solid masonry. Any return air intake located near the floor would have to be covered with a very fine screen to keep out dirt and burning cigarette butts.

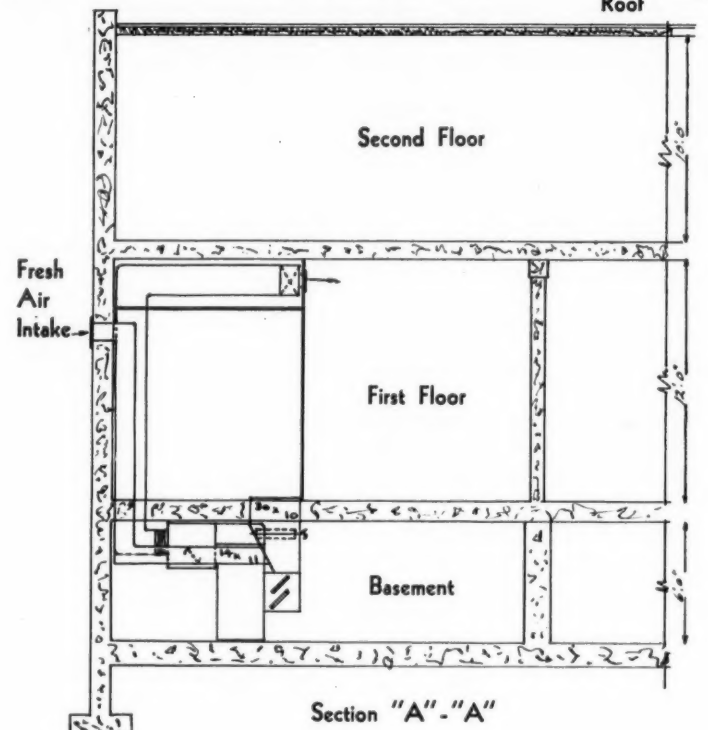
The engineer finally decided to extend the return air duct up into the closet space occupied by the telephone booth. This duct, measuring 30 by 10 inches, was run up along

How Low Cost System Was Installed In a Restaurant



All outlets for conditioned air entering the restaurant (above) were located over a vestibule in one corner of the building. Air is thrown over 40 feet, with benefit of a 12-foot ceiling. Return air enters a duct located in a telephone booth through a grille in the door.

The cross section at right shows how a self-contained central station system had to be mounted in two sections to fit in a basement having a very low ceiling. Fresh air was drawn from a point well above the sidewalk in the same corner of the building.



HEAT GAIN CALCULATIONS

Sensible Heat

Note: Venetian blinds on all windows.				
Sun on Glass	180 sq. ft. x 81 x .5	equals	7,250 B.t.u.	
Sun on Wall	264 sq. ft. x 15 x .3	equals	11,800 B.t.u.	
All Glass	360 sq. ft. x 15 x 1.1	equals	5,900 B.t.u.	
East Wall	396 sq. ft. x 15 x .3	equals	1,792 B.t.u.	
Rear Partition	1,120 sq. ft. x 10 x .3	equals	3,360 B.t.u.	
Floor	2,180 sq. ft. x 10 x .3	equals	6,500 B.t.u.	
People	120 x 220	equals	25,500 B.t.u.	
Total			68,602 B.t.u.	

Latent Heat

People—120 x 180	equals	21,800 B.t.u.	
Coffee Urn—2 gallons x 3,600	equals	7,200 B.t.u.	
Total		29,000 B.t.u.	

Fresh Air Load

120 People x 10	equals	1,200 c.f.m.	
Sensible—1,200 c.f.m. x 15 x 1.08	equals	19,200 B.t.u.	
Latent—1,200 c.f.m. x 20 x .67	equals	16,000 B.t.u.	
Total		35,200 B.t.u.	

Total Load

Sensible Heat	68,600 B.t.u. per hour
Latent Heat	29,000 B.t.u. per hour
Fresh Air Load	35,200 B.t.u. per hour
Total	132,800 B.t.u. per hour

Fan Load

68,600 (Sensible Heat)	
16 x 1.08	equals 4,000 c.f.m.

Equipment Selection

Use Self-Contained Central Station Unit, Capacity 4,000 c.f.m., 144,000 B.t.u. per hour.

Operating Conditions

98° F. Condensing Temperature
45° F. Suction Temperature

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WOLVERINE TUBE CO. DETROIT

REFRIGERATION
TUBING

ENDS
SEALED

MACHINE
WRAPPED



PENN BRASS & COPPER CO., INC.
ERIE, PA., U.S.A.

DESIGN CONDITIONS

Dry Bulb	Wet Bulb	Relative Humidity	Grains per Lb. of Air
95°	75°	40%	98
80°	67°	50%	78
15°			20

What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

'Combination' Ammeter Marketed By Simpson

A small a.c. multiple range ammeter, combining an indicating instrument and a current transformer, has been put on the market by Simpson Electric Co., Chicago, under the name of "Micro-Tester."

Line leader, Model 280, is claimed to provide readings in any of five different ranges, from fractions of an ampere up to 25 amperes. It is housed in a red bakelite moulded case, with satin-finish steel front panel. Pocket size, it measures only 2 1/4 x 5 1/4 x 1 3/4 inches, weighs but 20 ounces.

Companion testing instruments, all the same size, can be combined in sets of three to measure current, voltage, and resistance for almost every requirement, it is claimed. Kept in a sturdy carrying case, which has room for necessary leads, such a set is said to provide measurement on individual meters at a cost far below that of the usual combination instrument. The separate meters, too, allow greater flexibility.

These "Micro-Testers," singly, and in a kit set, are designed for use by manufacturers for supplementary and portable work.

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practical information on
Anaconda Copper
Refrigeration
Tubes



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices, Watertown, Mass.

New Portable Unit For 'Hot Ice Cream' Work

A portable "Freez-King" counter freezer of 1 gallon capacity has been added to its existing line of 2 1/2 and 5-gallon models by the Lorac Co. of Chicago.

Available in one model only, the 1 gallon "Freez-King" has stainless steel front and gray enamel side panels, and is equipped with automatic control with new pressure control valve. The unit is operated by plugging into any light socket.

Designed especially for use in dispensing frosted malteds and other



"hot ice cream" desserts, the unit has an automatic draw-off gate that is said to permit drawing off the mix in a fine stream for filling of all types of containers. Entire head is constructed of stainless steel and dairy metal.

New Nut Locks To Bolt, Not Work

A new one-piece, all metal lock nut has been announced by An-cor-lox division of Laminated Shim Co., Inc. of Glenbrook, Conn. Known as the An-cor-lox lock nut, the device is claimed to utilize a new locking principle that permits locking of the nut to the bolt, not to the work.

To apply, the lock nut is spun on the bolt and drawn up to the desired degree of tightness. The nut locks itself automatically to the bolt, the metal locking ring contained in the bottom of the nut being expanded by pressure into the root of the bolt thread and against the nut rim. The device is said to be adaptable to both long and short bolts.

The lock nut does not damage the bolt nor mar the surface of the work, it is claimed, and the same nut can be used several times without loss of locking effectiveness. The nuts are available in all sizes.

New Farm Refrigerator

Recently introduced by Kelvinator is this 8.2-cu. ft. refrigerator, designed specifically for the farm home. It provides space for a 5-gal. milk can and a tub containing 20 dozen eggs, incorporates five half-length shelves, any or all of which can be removed.



Friez Designs Control For Adverse Conditions

A new insertion humidity control, suitable for use where dust, dirt, and other adverse service conditions would prevent the satisfactory operation of other types, has been developed by Julien P. Friez & Sons.

New control features the Friez multiple human hair element, and a switch mechanism fully enclosed in a molded plastic case. Control of both humidifying and dehumidifying are provided over a range of from 10 to 100% R.H., with a sensitivity of plus or minus 1%.

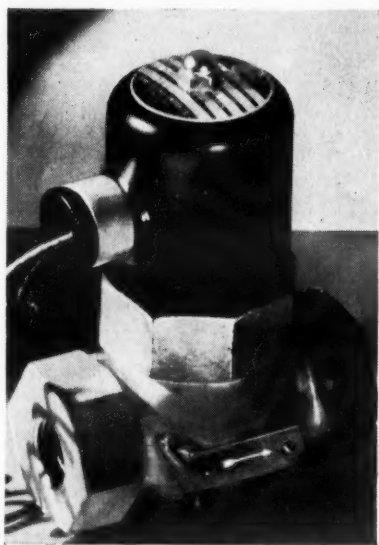
Known as the type H/61, this new instrument is suitable for use in bakers' proof-boxes, incubators, low-temperature ovens, test cabinets, and similar applications.

Penn Introducing Pilot Solenoids

GOSHEN, Ind.—Penn Electric Switch Co. has announced the production of solenoid refrigerant valves in sizes to 1/2 and 3/4 inch orifice diameter for installations to 45 tons refrigeration on "Freon" systems, 110 tons on methyl chloride systems, and 125 tons on sulphur dioxide systems. This new line of refrigerant valves incorporates the principle of pilot valve operation, making possible the use of small coils of low wattage consumption.

These valves are regularly supplied with 1/2 or 3/4-inch female iron pipe tapping for inlet and outlet connections, but are also available with sweat connections for installations made with copper tubing.

Main and pilot valve needles are of non-magnetic stainless steel, seating in bronze seat insets. Magnetic stainless steel plunger is of the "floating type," remaining suspended in the sealing tube when in the open position. This construction eliminates the necessity for a kick-off



spring, and the possibility of trouble from residual magnetism, it is claimed.

Quick hook-up design permits rotation of the conduit entrance to the most convenient point, with means provided for locking the cover and coil assembly in this desired position.

Valves are regularly supplied without a manual opening rod, but may be had on special order with a sealed manual opening rod which is easily accessible should manual operation ever be necessary. Coils are available for both a.c. and d.c. service.

Mack Wahn Opens New Cincinnati Dealership

CINCINNATI—Mack Wahn, who for many years represented York Ice Machinery Corp. in southern territories, has opened the Air Conditioning & Refrigeration Co. at 815 Race St. here.

He is selling the complete line of York air conditioning and refrigeration products and services in the Cincinnati area.

W. E. Landmesser, York's commercial refrigeration and air conditioning sales manager, was present at the opening, and assisted Mr. Wahn in setting up his new establishment.

New Alabama Distributor

BIRMINGHAM, Ala.—Gulf States Distributing Co. has opened at 2212 Third Ave. as distributor of radios, attic fans, and other appliances. Seymour Kronenberg is proprietor.



**Dayton
V-BELTS**

Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.

THE DAYTON RUBBER MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts



UNIVERSAL COOLER

The Seal of Quality Since 1922

DETROIT

RETARDO

ANOTHER NEW SALES OUTLET FOR COMPRESSORS

Sherer's RETARDO offers 72 hour retardation... increases bakery profits — will increase your equipment and compressor sales... Cash in on this new field. Sell a RETARDO and a compressor... RETARDO is only ONE number in the profit line for '40.

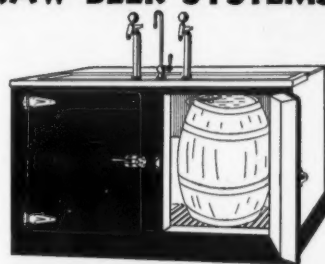
Ask for franchise details, mentioning territory covered.

SHERER-GILLETT COMPANY
MARSHALL, MICHIGAN

BAR-BOY --- DIRECT DRAW BEER SYSTEMS BUILT RIGHT -- PRICED RIGHT SIMPLE TO INSTALL

Available in 2-3-4 Keg Sizes.
Ice Water Faucet Standard On All Models.
Bottle Compartment And Ice-Maker Optional Equipment.
Full Line Of Beer Equipment, Including Walk-In Type Pre-Coolers And Dry-Storage Bottled Beverage Coolers.

INQUIRE TODAY!



FOGEL REFRIGERATOR COMPANY Since 1899 16th & Vine Sts., Phila., Pa.

Fan Blades and Blower Wheels



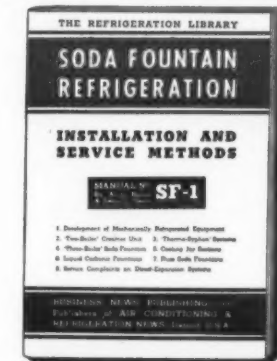
by
TORRINGTON

THE TORRINGTON MANUFACTURING CO. of TORRINGTON, CONNECTICUT

If you service soda fountains —you can use this manual

When these soda fountain service articles by Arch Black and Dean C. Seitz appeared in AIR CONDITIONING & REFRIGERATION NEWS, they attracted widespread attention and met with instantaneous popular approval. Now they are in book form, a series of two volumes.

Order from your jobber or send direct. Money back guarantee if not satisfied. Price per copy \$1.00.



Business News Publishing Co.
5229 Cass Ave., Detroit, Mich.

Date.....1940

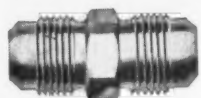
Gentlemen—Please ship the following books:

☐ Manual SF-1. ☐ Manual SF-2
☐ Enclosed find check. ☐ Ship C.O.D. and I will pay the postman.

Name

Company

Address



DENSE

A good fitting to handle the refrigerant gases must be made of a dense, homogenous metal, without possibility of seepage through its molecular structure.

For this reason, Commonwealth fittings are made of hot-forged brass or extruded brass rod, processed to prevent the escape of gases. The dense, close-grained brass is as tough as brass can be, and thus, after machining, is always able to deliver maximum service.

Machining of these fittings is an art in itself, and at Commonwealth, every efficient means of producing fittings of high quality is in constant service. The Means include Men of experience, Machines designed for the purpose, and Methods perfected over more than 30 years of service to the industry.

Hundreds of stock, semi-standard and special fitting patterns are available in any quantity and every fitting is "Built Right to Stay Tight."

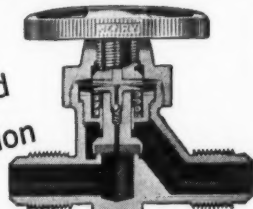
Send for Catalog No. 38.

COMMONWEALTH BRASS CORP.

Commonwealth at Grand Trunk RR.
Detroit, Mich.

HENRY BALANCED-ACTION
DIAPHRAGM PACKLESS VALVES

Non-Directional... Inlet and
outlet lines because of Balanced-Action
may be connected to either port.



RECOMMENDED AND SOLD BY LEADING JOBBERS
HENRY VALVE COMPANY
1001-19 N. SPAULDING AVE.
CHICAGO, ILL.



COLD! --and PURIFIED

For nearly 40 Years Puro has specialized in drinking water equipment. Many water coolers supply cold drinking water—no other offers the advantage of a self contained purifier—a sales point that means profit to dealers everywhere. Write for complete information about our complete line for all purposes.



ELECTRIC WATER COOLERS
Puro Filter Corp. of America, 440 Lafayette St., New York.

SPECIAL OFFER \$18.50

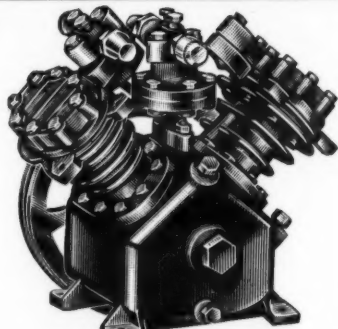
SERVEL Model J

4 cylinder compressor! New, in original factory crates, ideal replacement unit! Complete with 1/2" SAE intake and 1/2" discharge valves and flywheel. Bore 1 1/2". Stroke 1 1/2".

Price in lots 1 to 5 \$20.50
Price in lots 5 to 10 19.50
Price in lots 10 to 25 18.50

For 1/2 and 3/4 H. P. Commercial Units.
Ideal Replacement Compressor.

NATIONAL ELECTRIC TOOL CO.
1915 S. State (Ref. Division), Chicago, Ill.



SERVEL MODEL J
4 cylinder 1 1/2" x 1 1/2"



SNAP-ACTION VALVE

for Multiple Temperature
by *Aminco*

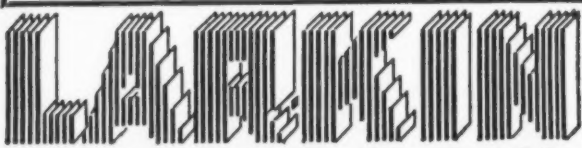
A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Snap Action Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

AMERICAN INJECTOR COMPANY

1481 Fourteenth Avenue
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif.
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.



WALL HUMI-TEMP UNITS

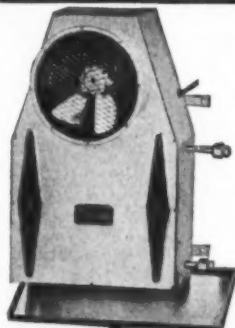
Share the added profits enjoyed by dealers everywhere. Sell the industry's leading forced convection unit—the Wall Humi-Temp. There's no better way of winning new customers and keeping old and new satisfied.

See your jobber or write direct to

LARKIN COILS, INC.

519 Fair St., S.E., ATLANTA, GA.

Originators of The Cross Fin Coil



Manufacturers Who Want To Offer Facilities For Materials Needed In Defense Work Should Contact War Dept. Field Offices

WASHINGTON, D. C.—With government agencies literally swamped with correspondence from manufacturers who wish to assist the government in every way possible in national defense measures, such as immediately adapting factory facilities to national defense needs, the War and Navy departments announce that current information of this type can best be secured from their field offices.

The Navy Department maintains 27 major field purchasing offices in 23 cities, while the War Department has 46 major field procurement offices in 22 cities. In a letter which accompanies the listing of the field offices, for publication in the industrial and trade press, Assistant Secretary of War Louis Johnson, states:

"The procurement system is decentralized. Consistent with our traditional policy, the details of the armament program from Washington are handled by the procurement districts.

"The best way to conserve time and effort is to deal direct with the nearest procurement officer in the field."

During recent weeks, several billions of dollars have been authorized by Congress in a great national defense program, and a National Defense Advisory Commission has been established. Most of these funds will be expended through the field offices of the War and Navy departments.

Procurement activities are, in general, of two types: (1) current or normal, (2) national emergency.

For minor current purchases needed by local offices, there are purchasing and contracting officers located in about 500 Army posts and offices (not including those in Alaska, Hawaii, etc.).

For emergency program purchasing, major field offices have been established in many cities: in 23 by the Navy Department and in 22 by seven branches of the War Department (the Infantry, Cavalry, etc., obtain their needs largely through the Ordnance, Quartermaster, etc., agencies). The addresses of the field offices are given below, as well as a partial list of the commodities which will be needed by each agency:

Air Corps

Purchases all flying equipment and the necessary facilities for operating the air bases.

Dayton, Ohio—Army Air Corps Central Procurement District, Wright Field.

New York City—Army Air Corps Eastern Procurement District, 90 Church St.

Santa Monica, Calif.—Army Air Corps Western Procurement District, 506 Santa Monica Blvd.

Most Air Corps procurement is handled through the Wright Field office at Dayton, Ohio.

EQUIPMENT

Airplanes, airplane equipment, airplane parts, aviation fuel, ground equipment, portable lighting equipment, portable photographic laboratories, other aeronautical supplies and accessories.

Chemical Warfare Service

Purchases items having to do with toxic gases, gas defense appliances, incendiary war materials, and the development of equipment for use in that type of service. (The principal purchasing office for normal current supplies is at the Edgewood Arsenal, Edgewood, Maryland.)

Boston—Army Chemical Warfare Service Procurement District, 2000 Post Office and Court House Building.

Chicago—Army Chemical Warfare Service Procurement District, 1113 Post Office Building.

New York City—Army Chemical Warfare Service Procurement District, Room 404, 45 Broadway.

Pittsburgh—Army Chemical Warfare Service Procurement District, 1014 New Federal Building.

San Francisco—Army Chemical Warfare Service Procurement District, 117 Federal Office Building.

EQUIPMENT

Ceramics: Stoneware jars, pipe and fittings, pumps, etc. Charcoal, activated.

Chemicals: Acetic acid, acetylene tetrachloride, ammonium perchlorate, aniline, calcium chloride, catalyst, carbon monoxide, chlorine, chlorosulfonic acid—sulfur trioxide, ethyl alcohol, hexachlorethane, phosphoric acid, soda ash, sodium acetate, sulfur monochloride, white phosphorus, zinc dust.

Chemical Plant Equipment: Brine units—refrigeration, burners—oil, compressors, coolers and scrubbers, flowmeters, furnaces, gauges—air, steam, and water, generators—ethylene, holders—gas, mixers—portable, pipe and fittings—hard rubber, pumps—centrifugal, sump, and vacuum, pycnometers, reactors—glass and lead lined, scales—monorail, screening and pulverizing units, tanks—measuring, tanks—storage, steel and aluminum.

Cotton Goods: Duck, paraffined, olive drab, 62 inches wide, felt, cotton, and wool, print cloth, olive drab, thread, cotton, olive drab and black, webbing, elastic and non-elastic.

Glass: Agitators—glass covered, buckets, lens—laminated (gas mask).

Machines: Arc welder, conveyors, cutting, drilling, hoists—electric, lathes—turret, motors, presses—automatic, riveting—automatic, sewing—power driven.

Molded and Fabricated Metals: Angletubes—aluminum, angletubes—copper, buckles—brass and bronze, castings—brass, bronze, and steel, elbow nozzles—aluminum, guards—outlet valve, slides—web strap, brass and bronze, tips—clinch, brass.

Molded Rubber, Gas Mask Components: Deflectors, discs, faceblanks, gaskets, headpads, hose elbows, hose tubes, mouthpieces, outlet valves.

Plastics: Guards—outlet valve, molded, lens—molded, sheet cellulose acetate

Corps of Engineers

The Military Branch buys the materials and equipment used for field work in connection with a mobilized Army. (The Non-Military Branch is in charge of the maintenance of the rivers and harbors throughout the country.)

The office of the Birmingham area is in Mobile.

Chicago—Army Engineer Procurement District, 1117 Post Office Building.

Mobile, Ala.—Army Engineer Procurement District, 212 Wilson Building.

New York City—Army Engineer Procurement District, 39 Whitehall St.

Philadelphia—Army Engineer Procurement District, Second and Chestnut Sts.

Pittsburgh—Army Engineer Procurement District, 1012 New Federal Building.

San Francisco—Army Engineer Procurement District, 409 Customhouse.

EQUIPMENT

Airbrake equipment, arches—corrugated steel, bags—burlap and canvas, belting—rubber, blocks—steel, board—drawing, boilers, books—note, boxes—carpenter, etc., bridges—steel.

Buildings—steel, burlap, cable, cameras, cars—railroad, chests, compasses, compressors—air, cranes—up to 50 ton, derricks.

Dredges, engines—gasoline and steam, forges, generator sets, hoists, instruments—drawing, jacks—2 to 50 ton, kettles—melting.

Knives—pocket, lathes, lighters, lithographic equipment and supplies, locomotives—gasoline and steam, machine and machine tool equipment, magnifying equipment, motors—electric, nets—camouflage, paper—photographic, printing, etc.

Photo-engravers' equipment and supplies, pontoon bridges, presses—hydraulic, protractors, pumps, saw mills, searchlights.

Shovels—steam and gasoline powered, steel—structural, steel—tubes, plates, etc., surveying equipment, tanks—storage, transformers—electric, type—printing, wagons—dump, wire—copper and steel, wire netting.

Ordnance Department

Procures all items of ammunition, weapons, fire control instruments, tools, machinery, and supplies used in the arsenals and necessary for the repair and maintenance of ordnance equipment.

Birmingham, Ala.—Army Ordnance District, 302 Comer Building.

Boston—Army Ordnance District, 2004 Post Office and Court House Building.

Chicago—Army Ordnance District, 309 West Jackson Blvd.

Cincinnati—Army Ordnance District, 521 Post Office Building.

Cleveland—Army Ordnance District, 1524 Keith Building.

Detroit—Army Ordnance District, 611 Federal Building.

Los Angeles—Army Ordnance Office, 409 Chamber of Commerce Building.

New York City—Army Ordnance District, Room 1214, 90 Church St.

Philadelphia—Army Ordnance District, 1417 Mitten Building.

Pittsburgh—Army Ordnance District, 1032 New Federal Building.

Rochester, N. Y.—Army Ordnance District, 1118 Mercantile Building.

St. Louis, Mo.—Army Ordnance District, 935 Customhouse.

San Francisco—Army Ordnance District, 118 Federal Office Building.

Springfield, Mass.—Army Ordnance District, 3640 Main St.

Wilmington, Del.—Army Ordnance Office, Nemours Building (for explosives only).

EQUIPMENT

Aluminum and aluminum alloys, bars, plates, rods, shapes, sheets, strips, and castings. Automotive equipment and maintenance supplies. Cartridge, brass. Chemical and physical laboratory supplies. Copper, brass and bronze—wire, bars, rods, plates, strips, castings and forgings. Dies, molds, gauges, etc. Electrical supplies—light and power. Electro-plating equipment and supplies. Explosives and separate explosive ingredients. Explosive processing equipment.

Gauges, dies, etc. General maintenance supplies. General construction supplies—steel, roofing, aggregates, etc. Heat-treating furnaces and accessories. Industrial chemicals. Iron and steel—wire, bars, rods, plates, shapes, forgings and castings.

Machines and machine tools—lathes, shapers, grinders, etc. Manufactured metal components. Optical instruments and accessories. Packing and shipping

materials—lumber, box shooks, strapping, etc. Paints and oils for ordnance material. Spray-painting equipment and supplies. Weighing scales—sensitive balances—and larger. Wood-working machinery and supplies.

Signal Corps.

Purchases general equipment for communications, photographic purchases, meteorological studies, etc.

Brooklyn—Army Signal Corps Procurement District, First Ave. and 58th St.

Chicago—Army Signal Corps Procurement District, 1819 West Pershing Rd.

San Francisco—Army Signal Corps Procurement District, The Presidio.

EQUIPMENT

Radio equipment, telegraph equipment, telephone equipment, meteorological equipment, photographic equipment, wire cable, miscellaneous supplies for communications, etc.

(List of field procurement offices of U. S. War and Navy Departments to be completed in a future issue.)

COMMERCIAL REFRIGERATORS
World's most complete line of commercial cabinets—13 to 84 cu. ft. capacity.
MIDWEST
MFG. COMPANY • GALESBURG, ILL.

Hardy-MAYFLOWER
commercial compressors
are a sure guarantee of satisfaction
Hardy Manufacturing Co., Inc.
126 Davis Ave., Dayton, O.

Sells Faster Because It Cools Faster!
IDEAL SPEED COOLER
Ideal Beer Cooler Co.
2953 Easton Ave., St. Louis, Mo.

HyDroLoc Individual Lockers
have the call. Many unusual advantages not found in others.
Sold only thru distributors of refrigeration and insulation.
Get our proposition
Master Refrigerated Locker Systems, Inc.
121 Main St. Sioux City, Iowa

PANEL UNIT COOLERS
Solves Many Coil Space Problems
KRAMER-TRENTON CO.
TRENTON, N. J.

CAMPBELL REFRIGERATOR CO.
Milwaukee, Wis.
Dealers Wanted for Midwestern and Southern States

PENN Leads in
Automatic Switches and Controls
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

A New Improved Dehydrator on the Market Soon
Look for Our Announcement
MUELLER BRASS CO.
Port Huron, Mich.

NEW
WHEEL PULLER
No. 5 Capacity 7" diam.

A simple, efficient tool for hard pulling jobs such as flywheels, fans and pulleys—universal for all make refrigerators. Rotating arms grip in any position—internal or external pulley—odd and even spoked wheels. Hex head power screw has narrow band to facilitate hand turning. Made of special steel, hardened and tempered. Fully guaranteed. Sold by mill supply and refrigeration jobbers.

J. H. WILLIAMS & CO.
225 Lafayette St., New York, N. Y.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS
REFRIGERATION TOOLS

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions, \$5.00, additional words ten cents each.
PAYMENT in advance is required for

GALE COMPRESSORS

Single and twin cylinder units. Engineered and manufactured to highest standards. Write GALE PRODUCTS 1635 Monmouth, Galesburg, Ill.

The Most Accurate Control Valve for Small Capacity Systems

The "TK" Thermo Valve
Alco Valve Co., St. Louis, Mo.

Use CHICAGO SEALS for seal replacements

A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

KERO TEST

Valves and Fittings
The Standard of the Industry

Kerotest Manufacturing Co.
Pittsburgh, Pa.

Looking for a TRAINED MAN?

Call on the U.E.I. Placement Bureau for a trained, reliable, competent worker. For over 13 years U.E.I. trained men have been making good employees for all positions requiring technical knowledge or mechanical ability. Remember, the U.E.I. Placement Bureau Service is FREE to you and your prospective employee. Try it.



UTILITIES ENGINEERING INSTITUTE
404 N. Wells St. Est. 1927 Chicago, Illinois

Anaconda Copper Refrigeration Tubes

No cracks or splits when flared against a block



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices, Waterbury, Conn.



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

FRANCHISES AVAILABLE

SEND FOR PRICES and literature on the General 1940 all streamlined refrigerator display case line. Over 40 years experience manufacturing good commercial refrigerators. On a comparative price test with other makes of equal specifications, prices are lowest in the country. GENERAL REFRIGERATOR & STORE FIXTURE CO., 5th & Bainbridge Sts., Philadelphia, Pa.

BUSINESS OPPORTUNITIES

COMMERCIAL refrigerator manufacturing business, old established, in a large eastern city, manufacturing all kinds of special refrigerators, display cases, etc., now in operation. Can be bought very reasonable including plant and buildings, or will consider partner who is an experienced sales manager, taking charge of salesmen. Must be a real deal closer. Box No. 1246, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE BUY surplus and discontinued portable air conditioning units when offered at attractive prices. Advise quantity and size of equipment available and why; state price and furnish descriptive circulars. Also furnish some evidence of original retail price. Also interested portable heaters. AMERICAN APPLIANCE CO., 1216 S.W. Eighth St., Miami, Fla.

EQUIPMENT FOR SALE

BRAND NEW Westinghouse one ton low-sides complete with fans, coils, expansion valves, manual controls, heat exchanger, and cabinet \$32.50 each. Brand new General Electric 1/2 H.P. and 1 H.P. high-sides also available. Write for details. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

BRAND NEW air cooled High Sides at exceptionally low prices. These condensing units are complete, ready to be plugged in. They are made up with all new parts; General Electric or Frigidaire Compressor, General Electric or Delco Motor, heavy duty condenser, heavy base, receiver, valves, etc.; charged with Methyl or "Freon." They are available in 1/2-1/4 and 1/2 H.P. GENERAL REFRIGERATORS CORPORATION, 518 East 20th Street, New York, N. Y.

FRIGIDAIRE super line compressors, 1/4-1/2 H.P., flywheel and valve connectors \$18.50. 20 & 22X resilver soldered Frigidaire coils, less float \$10.00 and \$12.50. Frigidaire 4 to 8 hole, brine ice cream cabinets with compressors used. RE-NU COMPRESSOR & SUPPLY CO., 2462 Fond du Lac Ave., Milwaukee, Wis.

AIR CONDITIONERS, General Electric and Fairbanks Morse. All brand new in original crates, beautiful walnut cabinets, size about 42 inches long, 41 inches high, and 19 inches deep. All AC. 90 Fairbanks Morse 3/4 ton air cooled, cost about \$400. Our price \$150. 74 General Electric 1 ton water cooled, cost about \$500. Our price \$175. Also 1 ton General Electric highside \$125. G & G GENUINE MAJESTIC REFRIGERATOR AND RADIO PARTS SERVICE, 2429 Wabash, Chicago.

REPAIR SERVICE

SPECIAL PRICES! G.E. DR-1-DR-2; domestic Westinghouse and Majestic \$24.50 to customers purchasing ten or more units a year. Regular price \$27.00. One year unconditional guarantee. Place order for any Model G.E., Westinghouse or Majestic sealed unit advising complete model and type needed. Shipment will be made from stock same day. Return old unit later. Our production lines turn out completely rebuilt sealed units mechanically comparable to manufacturer's. We offer replacement service inferior to none at prices that enable you to realize profit on resale. Send for complete Replacement Schedule 40BB. REX REFRIGERATION SERVICE, INC., 2226 South State Street, Chicago, Ill.

COMMERCIAL AND DOMESTIC controls reconditioned like new at a small cost. All work guaranteed for one year. We also repair all types of relays with same guarantee. UNITED REPAIR SERVICE, 342 West 70th St., New York, N. Y., TRafalgar 4-2557-8.

FREE HERMETIC CATALOG complete with prices on refrigerator units, rebuilding and exchange service. General Electric, Westinghouse, Majestic, Frigidaire and a complete stock of Grunow compressors and parts. Immediate shipment. For your copy specify catalog A. SERVICE PARTS COMPANY, 1101-3 North 24th Avenue, Melrose Park, Illinois.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALETRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

WORLD'S LARGEST rebuilders of refrigeration units. Original, Genuine Majestic replacement units and parts for refrigerator and radio. Rebuilders of Majestic, General Electric, Grunow, Westinghouse, Coldspot, Servel, Gibson units at \$25 up with 18 months' guarantee protection bond. 500 units on hand. Send for catalog. G & G GENUINE MAJESTIC REFRIGERATOR & RADIO PARTS SERVICE, 2429 Wabash Ave., Chicago.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

All-Porcelain Units Up 83% in May

(Concluded from Page 1, Column 2)

household electric refrigerators came to 376,609 units for May compared with 330,008 for the month before. Shipments of porcelain enameled models advanced from 9,793 in April to 18,010 in May. Most of this advance was recorded in the popular 6-foot size, which increased from 6,437 units to 13,602, an increase of 111.3%.

Improvements in design and in the enameling process have been developed by refrigerator manufacturers in cooperation with suppliers of enameling frit and steel, and these advances led to manufacturing economies and made possible a substantial reduction in the price of porcelain enameled models this year, according to Harry W. Ewald, director of merchandising for the Porcelain Enamel Institute. The 6-foot porcelain enameled refrigerator sells for \$157.50 to \$159.95 this year, compared to prices ranging upwards of \$200 for similar models last year.

Buffalo Council Offers Promotion Booklet

(Concluded from Page 1, Column 1)

department store, restaurant, theater, night club, men's store, general office, railway car, hotel lobby, and a factory. One page is devoted to a check list of factors which influence the purchase of cooling equipment.

Printed in two colors, the booklet measures approximately 4 inches by 9 inches, and may be carried in the pocket.

Mr. Davis states that the Air Conditioning Council of Western New York will send sample copies of the booklets to all dealers and others interested, who send requests. Headquarters of the council is 1001 Electric Building, Buffalo.

Easy Washer Co. Answers Apex Patent Suit

DETROIT—Motion for a bill of particulars in the patent infringement suit instituted against them in U. S. District Court here by Apex Electrical Mfg. Co. and James B. Kirby, inventor, has been filed by Easy Washing Machine Corp. and Good Housekeeping Shop, as dealer, defendants in the action.

In the motion, defendants state that the charges are general and indefinite, and that all washing machines, wringers, and ironers which the original complaint alleges are infringing on certain patents owned and controlled by the plaintiffs and are manufactured and sold by the defendants, are identified by model numbers and serial numbers, and that full information thereon is available to the public.

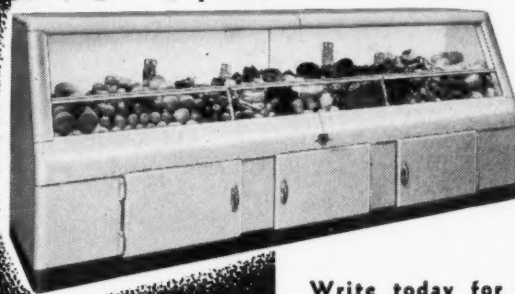
The motion also declares that it is the custom of the Easy Washing Machine Corp. to make frequent improvements and changes on its models, and that many machines were sold after the patents were issued and within six years before the complaint was filed.

Defendants also offer, in the motion, to exhibit to the plaintiffs models of all washing machines, ironers, and wringers alleged to show patent infringements, currently being sold as well as to make accessible information about earlier models.



OPEN for Business

The Crispeteria is open OPEN for compelling, attention-getting display of produce OPEN for customers loaded down with purchases, who can't open bulky doors OPEN for easy handling and selection . . . OPEN FOR BUSINESS! OPEN so that grocers are eager to install one. OPEN a new field for profits by selling the Crispeteria.



KOCH REFRIGERATORS

NORTH KANSAS CITY, MO.

Write today for details and open territories.

Chieftain



The final answer to the question of Quality is Field Acceptance. Ask the Chieftain User.

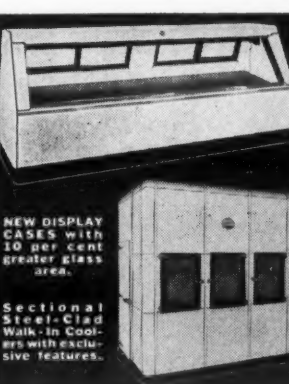
TECUMSEH PRODUCTS CO., TECUMSEH, MICH.
Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

One Instrument UNIVERSAL IN APPLICATION

FOR PRESSURE CONTROL UP TO 1 H.P.A.C.

POLARTRON

MINNEAPOLIS-HONEYWELL REFRIGERATION CONTROL
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
2407 FOURTH AVENUE SOUTH, MINNEAPOLIS, MINNESOTA
CANADIAN PLANT: 1000 BAYVIEW AVENUE, SCARBOROUGH, ONTARIO



MAKE BIGGER PROFITS

TYLER full line dealers and distributors are setting new records for sales and profits. Tyler's big line enables you to completely outfit modern food stores and opens up hundreds of live prospects in other fields. Famous Welded Steel construction. Phenomenal values. Display cases . . . Reach-Ins . . . Walk-Ins . . . Vegetable Displays . . . and special type refrigerators to fit all needs. Every one a super value. Write for details. TYLER FIXTURE CORP., Dept. E, Niles, Mich.
New York Office: 601 W. 26th St.
Boston Office: 603 Beacon St. Chicago Office: 1863 W. Ogden Ave.

REACH-IN BOXES—40% greater capacity.
TYLER Refrigerators
WELDED STEEL

REFRIGERATION and AIR CONDITIONING PARTS and EQUIPMENT

TO SERVE YOU MORE QUICKLY 12 CONVENIENTLY LOCATED WAREHOUSES

WRITE FOR CATALOG

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A SINGLE DIAL REPLACEMENT

For Practically Universal Application

Ranco

RJS-830 CONTROL

SEE YOUR RANCO JOBBER

Ranco INC., Columbus, Ohio, USA

Getting Set For 1941 Sales



Although there's still plenty of business to be had in 1940, manufacturers already are busy with plans for next year. Here C. W. Faude, Cramer-Krasselt agency, explains 1941 plans to Knapp-Monarch Co. salesmen.

N.Y. Edison To Launch Two-Month Drive on Modern Home Laundry

(Concluded from Page 1, Column 2) ment, but water heaters, sewing machines, and radios as well, since these appliances are considered integral parts of a "modern home laundry" setup.

The home laundry campaign will differ basically from most of the utility's recent merchandise activities, Mr. Jeffe explained, in that it will not be predicated in any way on any particular appliances or prices. Rather, he said, it will be a general promotion of an educational-institutional nature, stressing the importance of the modern home laundry.

Manufacturers and dealers would be free, however, to feature their own individual appliances or groups of appliances in connection with the general promotion.

A broad advertising schedule has been prepared by the utility to support the campaign, with cooperative support by manufacturers and distributors one of several campaign details still to be determined.

Final plans for the promotion were placed in the hands of a committee, headed by Edward Holmberg of the utility's Queens branch and including Edward Ingraham, president of Times Appliances, Inc., Westinghouse distributor; R. S. Stevenson of Rex Cole, Inc., General Electric distributor; Jack Walters, New York sales manager for Apex Rotarex Corp.; H. A. Glasser of Bruno Distributors, Inc., Bendix distributor; W. H. Leck, New York sales manager for Maytag Co.; and John Carlisle of the Consolidated Edison sales department.

The activity will be organized, it is said, so as to cover home laundry equipment prospects of all types—builders, home owners, apartment house owners, and apartment house residents—and will cover not only all types of home laundry equipment, but water heaters, dryers, radios, sewing machines, adequate laundry illumination, and all similar related items. Consolidated Edison, Mr. Jeffe said, will be in a position to arrange special financing arrangements to facilitate sales of all appliances featured in the drive.

New G-E Dealer

BROOKNEAL, Va. — Brookneal Motor Co. has been named General Electric dealer here.

Three Brunner Field Men Assigned To New Districts

(Concluded from Page 1, Column 3) covering the state of Michigan, upper Indiana, and part of Ohio. Mr. Dekker formerly covered the southern territory of Tennessee, Alabama, and Mississippi, with headquarters in Memphis. Prior to joining the Brunner organization, Mr. Dekker's previous experience was with Kelvinator, Brunswick-Balke-Collender Co., Electromatic Corp., and F. H. Langsenkamp Co. His headquarters will be in Detroit.

The territory formerly covered by Mr. Dekker will be added to the present territory of H. T. Noone, whose headquarters are in Atlanta. In addition to covering the six southern states, Mr. Noone will manage the Brunner warehouses in Atlanta and Memphis. He has been with the Brunner organization for a little over two years. Previously Mr. Noone was associated with Worthington Pump & Machinery Corp., General Electric Co., and Brunswick Refrigeration Co.

ABC Distributor Named

LITTLE ROCK, Ark.—Gunn Distributing Co., Little Rock, has been appointed state distributor for ABC washers and ironers.

CORNERS



25th Anniversary Year... 1915-1940

NO CUT

• The corner is cut out of this Ansul advertisement, but there are no corners cut in the production of Ansul refrigerants. Ansul tests and checks at every step right up to the loading platform. And every cylinder of Ansul gases carries its own individual analysis tag—written assurance it is Clean, Pure, Dry. Agents for Kinetic's "Freon-12"

ANSUL CHEMICAL COMPANY

ANSUL
SULPHUR DIOXIDE
METHYL CHLORIDE

MARINETTE, WISCONSIN

Universal Cooler Corp. Profit Is \$44,119

DETROIT — Universal Cooler Corp.'s report for the quarter ended June 30 shows a net profit of \$44,119 after depreciation, federal income taxes, etc., equal after dividend requirements on the class "A" stock to 6 cents a share on 306,386 shares of no par class "B" stock.

This compares with a net profit of \$49,937 or 8 cents a share on the class "B" stock in the corresponding period of last year.

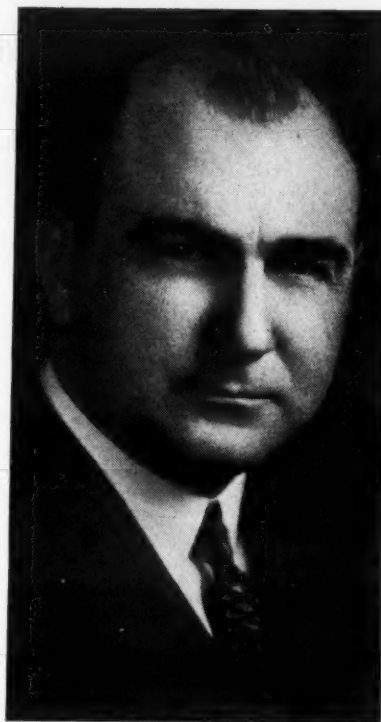
For the nine months ended June 30, the net profit was \$63,435, or 63 cents a share on 101,178 shares of class "A" convertible participating no par stock, compared with a net profit of \$64,770, or 64 cents a share, in the same period of 1939.

Model Time-Pay Law Before Congress

(Concluded from Page 1, Column 5) possessions must be held for 30 days. For the first 15 days, the buyer may redeem by paying all charges including reasonable repossession, storage, and similar fees. He may, within 30 days, require that the property be sold at public auction, in which event the buyer assumes liability for a deficiency judgment.

The bill also provides that the contract be printed in not less than 8-point bold face type, and a copy delivered to the buyer at time of execution. It would show interest or finance charges, and the total amount of all payments.

To Celotex



L. R. BOULWARE

(Concluded from Page 1, Column 4) Easy Washing Machine Co., and before that comptroller, purchasing agent, and factory manager in mid-western plants. He is a graduate of the University of Wisconsin, and was a captain of infantry in the last war.

The creation of the new position occupied by Mr. Boulware was made necessary by the expanding business of the Celotex Corp. and the resulting increase of administrative duties, according to Mr. Dahlberg.

Philco 6-Month Sales Show 30% Increase

PHILADELPHIA—Sales of Philco products in the first six months of this year increased 30% over those for the same period of a year ago, reports James T. Buckley, president of Philco Corp.

Preliminary and sample orders for Philco 1941 receiving sets and the new photo-electric phonographs totaled approximately \$15,268,350.

From 1/4 to
25 TONS
of refrigeration

Brunner Refrigerating and Air Conditioning equipment comprises air and water cooled condensing units for practically all types of commercial applications up to and including 25 tons of refrigeration... Catalog promptly on request. Brunner Manufacturing Co., Utica, N. Y., U. S. A.



FOR YEARS THE SYMBOL OF QUALITY

dependable  valves control refrigeration

DEPENDABLE



 Model 204
AUTOMATIC
EXPANSION VALVE

DEPENDABILITY IN VALVES

When you've sunk a couple of days' hard work on an installation that cost your customer many dollars, it's good to know that the "little things" . . . like the Expansion Valve or Solenoid Valves . . . can be depended upon to protect all your skill and labor.

That's the main reason Service Men and installing Engineers so enthusiastically demand A-P Valves for Refrigerant Control on every job.

It's priceless . . . this DEPENDABILITY so long attached to A-P Products! And it's YOURS, to help you to profits on every installation. Use it!

A-P builds DEPENDABILITY into a full line of Thermostatic Expansion Valves, Solenoids, Suction Pressure Valves, Water Valves, Temperature Control Sets, and the new "TRAP-IT" System-Protectors.

Small, compact, designed for fractional tonnage units such as Domestic Refrigerators and Beverage Coolers. Provides easy and accurate adjustment of back pressure. Rate 1/4 ton Freon, 1/2 ton Methyl or Sulphur. Has handy Wrench Pads, Moisture-proof Breather Cap, Large, Adequate Strainer. Non-chattering construction. A typical A-P DEPENDABLE Valve.

AUTOMATIC PRODUCTS COMPANY

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MILWAUKEE WISCONSIN

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